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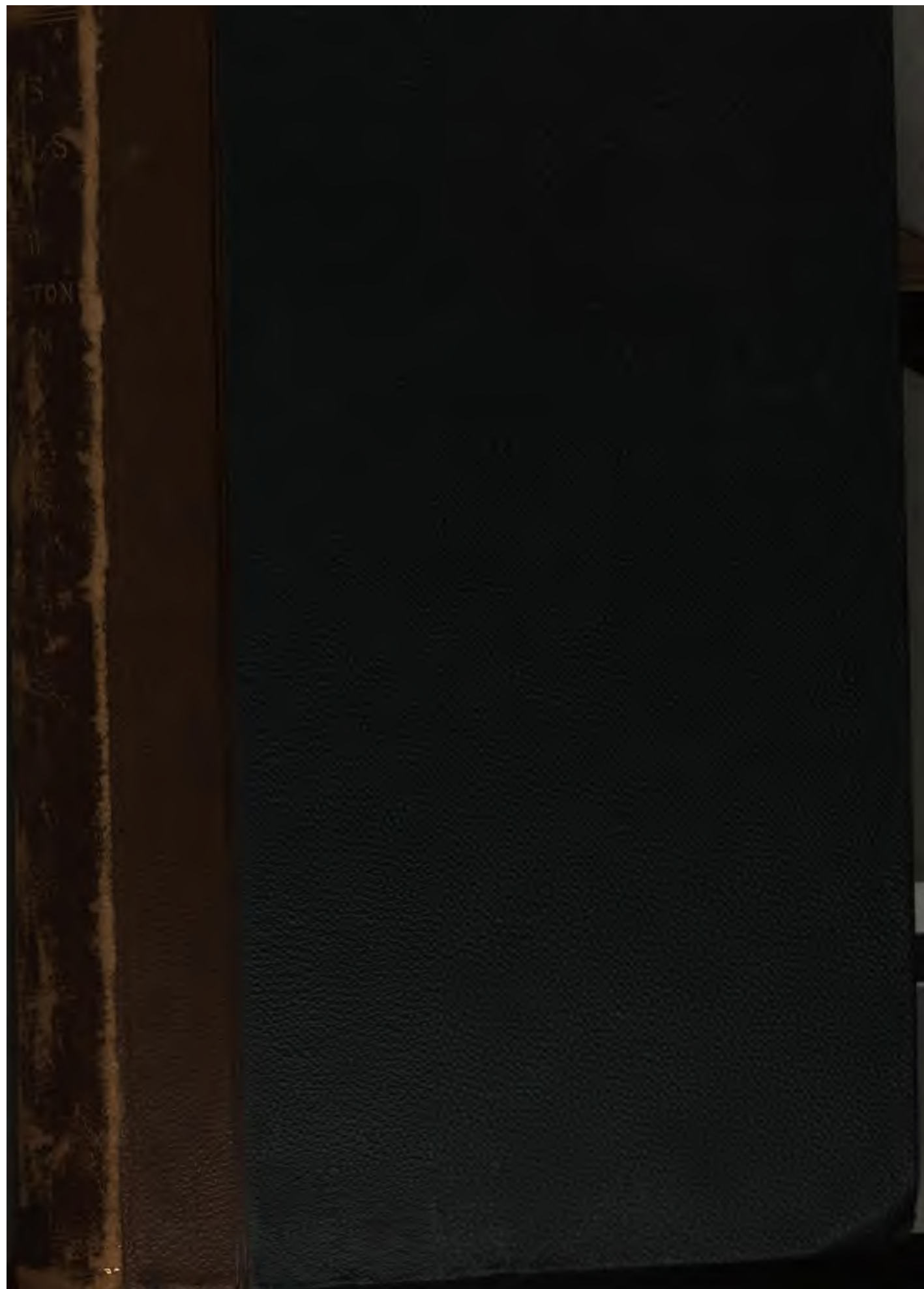
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GLASS VESSELS
IN THE
SOUTH KENSINGTON MUSEUM.

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Yusuf Basha, Dag & Son, 1866

LAMP FOR A MOSQUE.

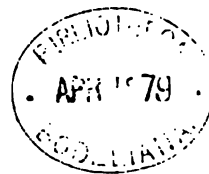
Arabian, 14th Century. (1050/10.)

SCIENCE AND ART DEPARTMENT
OF THE COMMITTEE OF COUNCIL ON EDUCATION,
SOUTH KENSINGTON MUSEUM.

A
DESCRIPTIVE CATALOGUE
OF THE
GLASS VESSELS
IN THE
SOUTH KENSINGTON MUSEUM.

With an Introductory Notice

BY
ALEXANDER NESBITT, F.S.A.



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INTRODUCTION.



GLASS is a substance the principal and essential constituents of which are silica and an alkali. It may be considered as consisting of one or more salts, which are silicates with bases of potash, soda, lime, oxide of iron, aluminium, or lead, in any of which compounds one of these bases may be substituted for another, provided that one alkaline base be left. (Ure's "Dictionary of Chemistry, Art. Glass.")

It may be divided into two classes, native and artificial. The first, known as obsidian, is found in the vicinity of volcanoes, and is an impure semi-transparent glass, varying in colour from grey to black; it has been used in the fabrication of works of art by the Egyptians and Romans, and in later times by the Mexicans.

The other class, viz., that produced artificially, has been of infinitely greater importance to mankind; for, though the arts of metallurgy and of pottery ministered more directly to the needs of man in the earlier stages of his existence on the earth, that of glass making conduces to his progress in knowledge and art, to his comfort, and to his luxury in a most remarkable degree.

To it we owe our knowledge of the distant worlds in the heavens, and of the minute structure of all around us; the inestimable advantage of abundant light in our dwellings and workshops, the plenty of cheap, cleanly, and

elegant vessels for so many of our domestic needs, and the frequent gratification of our taste for the beautiful; for glass presents itself to our eyes on all sides, not only in windows, mirrors, and vessels formed entirely of glass, but as enamel and glaze on the surfaces of metal and pottery.

Its adaptability for all these uses it owes to certain peculiarities: it is tenacious when softened by heat, and capable when in that state of being moulded into any desired form; it retains on cooling the smooth and shining surface which it acquires on being heated, so that no costly polishing processes are required; and it can be produced either wholly devoid of colour or tinted with any hue, and either opaque or transparent, without loss of brilliancy.

These qualities have made vessels and ornaments of glass the objects of attention and admiration of the savage and of the man of the most refined taste, and have given us in the painted windows of medieval churches objects of almost unearthly splendour, and in Mosaic, the noblest and most lasting means of internal decoration.

Although it is not the object of this preface to enter into the subject of the manufacture of glass, it is necessary that a few words should be said as to its chemical composition.

The following classification of glasses, founded on their chemical composition, has been proposed (Ure's "Dict. of Arts, &c., Art. Glass") :—

1. Soluble glass: A simple silicate of potash or soda, or of both these alkalies.
2. Crown glass: A silicate of potash and lime.
3. Bottle glass: Silicate of lime, soda, alumina, and iron.
4. Common window glass: Silicate of soda and lime, sometimes also of potash.
5. Plate glass: Silica, soda or potash, lime, and alumina.
6. Ordinary crystal glass: Silicate of potash and lead.
7. Flint glass: Silicate of potash and lead.

8. Strafs : Silicate of potash and lead, still richer in lead.
9. Enamel : Silicate and stannate, or antimoniate of potash, or soda and lead.¹

The proportions in which these are combined, so as to form the various kinds of glaſs, are about as follows :—

	Silicic Acid.	Potash or Soda.	Lime.	Ox. of Lead or Iron.	Alumina.	Water.
Soluble Glaſs	- 62	26	-	-	-	12
Crown „	- 63	22	12	-	3	-
Bottle „	- 54	5	20	6 ox. iron	-	-
Common window glaſs.	69	11 foda	13	-	7	-
Plate glaſs	- 72	17 „	6	2 ox. iron	2	-
Cryſtal „	- 61	6	-	33 lead	-	-
Flint „	- 45	12 potaſh	-	43 do.	-	-
Strafs „	- 38	8	-	53 do.	1	-
Enamel „	- 31	8	-	50 do. 10 ox. tin.	-	-

An analyſis of plates of glaſs found at Herculaneum, read before the Academie des Sciences, Paris, on 5th May, 1862, gives the compoſition as: ſilica, 69; foda, 17; lime, 7; alumina, 3; oxide (of iron?), 1.

Analyſes of ancient Roman glaſs, by Richard Phillips, ſhow the following reſults:—

	Silica.	Alumina.	Ox. of Iron.	Man- ganefe.	Lime.	Mag- neſia.	Soda.
Roman baſe (?)	- 70.58	1.80	.53	.48	8	trace	18.86
„ flattened glaſs	71.95	trace	3.45	.57	7.33	.60	15.30
„ lachymatory	- 71.45	2.15	1.02	.17	8.14	trace	16.62

from which it appears that its compoſition did not differ very much from that of plate glaſs.

Venetian glaſs, like Roman, was made principally with foda, but it appears from the receipts given in the 15th century

¹ It ſhould be remarked on this table that crown glaſs always contains foda, that alumina and iron are accidental, not eſſential conſtituents of bottle glaſs, and that enamels vary very much in their compoſition; tin is not preſent in transparent enamels.

MSS. recently printed by Milanese (*Scelte di Curiosità Letterarie Inedite o Rare, Disp. li.*), that a mixture of potash obtained from the lees of wine was used. In France potash obtained from fern appears to have been the alkali used throughout the middle ages.

Although coloured glass is made in very small quantities in proportion to uncoloured, this branch of the manufacture has produced by far the greater proportion of the objects which attract by their beauty, and a few words may therefore fitly be said upon the subject of colouring glass.

The various colours are usually obtained :

Yellow, from charcoal, antimony, or silver ; a peculiar canary yellow from uranium.

Red, from sub-oxide of copper and from gold ; brownish red from protoxide of iron.¹

Green, from protoxide of iron, oxide of copper, of chromium, and mixtures of oxides of nickel and uranium.

Blue, from cobalt, also from iron.

Amethystine, from manganese.

Brown, from the same.²

Orange, from peroxide of iron with chloride of silver ; also, it is said, from arsenic.

Black, from scoria of iron or charcoal.

The art of colouring glass is, however, a very subtle and difficult one, much depending upon the skill of the artificer in properly adjusting the degree of heat, and very small quantities of added ingredients will often greatly affect the result.

Mr. Bontemps, at the meeting of the British Association at Birmingham, brought forward some very extraordinary facts in connexion with the colouring powers of different bodies.

¹ Much interesting information as to the colours produced by the protoxide and peroxide of iron respectively will be found in that part of Dr. Percy's work on Metallurgy (vol. i. ed. 1875) which treats of slags.

² This is doubtful.

It was shewn that all the colours of the prismatic spectrum might be given to glass by the use of the oxide of iron in varying proportions, and by the agency of different degrees of heat, the conclusion of the author being that all the different colours are produced in their natural disposition in proportion as the temperature is increased. (Ure's "Dicty. of Chemistry.")

Manganese, copper, silver, gold, and charcoal were all found to produce corresponding results; gold, for instance, giving a great many tints varying from blue to pink, red, opaque yellow, and green. M. Bontemps was of opinion that, in the case of manganese, light is the agent which produces change, and doubts whether any change in the oxidation of the metal will explain the photogenic effect. He is disposed to refer the chromatic changes in most, if not in all cases, rather to some modifications of the composing particles than to any chemical changes in the materials employed. (Ure's "Dicty. of Chemistry, Art. Glass.")

Although the general practice has been, and is, to employ the oxide of some particular metal to produce a particular colour, analysis of ancient glasses has shewn both that various colours have been obtained from the same metal, as in cases mentioned by Von Minutoli ("Ueber die die Aufertigung der farbigen Gläser bei den Alten," p. 31), where Klaproth found that oxide of copper was the colouring matter of both opaque red and opaque green glass, and that various metals will produce very similar colours, *e.g.*, the Roman opaque red glass generally contains copper, but a recent analysis made in London shewed that oxide of iron and not copper was in one case at least present.

As regards the manipulation which the production of objects of glass requires, all that need be said here is that the constituent materials being mixed in due proportions are fused together in earthen pots, and that the glass, when in a proper state, is either cast, drawn out in rods, or blown; the peculiar tenacity of the substance allowing the latter very peculiar process

to be adopted. It was discovered at a very early date, for glass-blowing is represented in paintings in a tomb at Beni Hasan, in Egypt, dating from the reign of Osirtasen the First, at least 2,000 years B.C.¹ The deviser of it must have been a man of great acuteness and originality, for the invention of glass blowing is perhaps more wonderful than that of glass itself.

The glass vessel, after it is formed, has to go through the process of annealing, or slowly cooling, which greatly diminishes its liability to sudden fracture. Annealing in oil is said to increase its toughness in a material degree. This practice has of late been brought prominently before the notice of the public as if a new invention, but has really been known for some time. It is mentioned in the article on glass in Ure's "Dictionary of Chemistry."

Polishing, as has been said before, is not ordinarily given to blown vessels, but is required when an object has been cast, as plate glass, or when it has been ground, or as it is commonly called cut.

A sketch of the history of glass making may be conveniently divided into the following sections:

Glass in Egypt, Phœnicia, and Greece.

Glass in Rome and the provinces of the Roman Empire.

Glass in Byzantium and the provinces of the Eastern Empire.

Glass in Persia, and other parts of the East not subject to the Greek Emperors, and in Egypt after A.D. 639.

Glass in India.

Glass in China.

Glass in Italy.

Glass in France.

Glass in Spain.

¹ Wilkinson's "Manners and Customs of the Ancient Egyptians," vol. iii., p. 89.

Glas in the Low Countries.

Glas in Germany.

Glas in the British Islands.

GLASS IN EGYPT, PHœNICIA, AND GREECE.

The art of glas making has not been, like those of pottery and of metallurgy, a possession of nearly all tribes of the human race in the earliest infancy of their civilization. It does not appear to have been known to the Mexicans or Peruvians, although both had made very considerable advances in civilization and art. Even the Chinese did not possess it at any very early time, for about 200 years B.C. would seem to be the most remote date at which that nation even claims to have practised it; glas is not mentioned by Homer, nor do any fragments of it appear to have been found by Dr. Schliemann upon the supposed site of Ilium.¹

It is perhaps hardly too bold an assertion that the knowledge of the art throughout the world derives from one source, and that that is Egypt; certainly the most ancient monuments of the art are Egyptian, and we may trace channels of communication by which a knowledge of it may have been transmitted from Egypt to every part of the globe where it is now or has been practised.

One consequence of this is that objects, though produced in different countries, closely resemble one another, *e.g.*, Egyptian and Phœnician in the earlier ages, and in the later, Egyptian and Roman, nor in many cases can any difference be found between glas made at Rome itself and in the provinces of the empire. So in later times workmen from Venice imitated the products of Murano in Spain, the Low Countries, France, and England.

¹ He has, however, stated that he found ornaments of doors, and a bead of the same material. (*Times*, 27 Sept. 1876.)

It is therefore very often impossible to ascribe objects to their place of manufacture with the confidence which can be felt in the case of arts more autochthonous than that of glass, *e.g.*, the ceramic. It is but exceptionally that vessels of glass bear inscriptions, and the assistance which they afford towards the precise identification of objects is therefore usually wanting.

The art was undoubtedly discovered at a very early period; one so early that the true history of the invention is no doubt lost to us; Pliny and other ancient authors tell us that it was reported that Phœnician merchants returning from Egypt to Syria with a cargo of natron or soda, when cooking on the sandy beach under Mount Carmel, rested their pots on blocks of natron, and that glass was produced in consequence of the heat of the fire causing the alkali to form a flux for the silicious sand. Sir H. Rawlinson remarks upon this (Herodotus, vol. ii. p. 82) that such an accident is more likely to have occurred in Egypt, in many parts of which the soil contains abundance of natron (sub-carbonate of soda) as well as of sand. But as M. Sauzay (*Merveilles de la Verrerie*, p. 4) observes, a heat of 1,000 to 1,500 degrees is required in order to make the materials of which glass is formed enter into fusion, and it may therefore well be doubted whether such a production of glass in the open air is possible.

However, as glass is produced accidentally in the course of some metallurgical operations, such as the smelting of certain ores; and as it is also formed when vegetable substances containing both silica and an alkali, such as reeds and straw, are burnt in large masses (an accident not at all unlikely to have occurred in Egypt, where huge masses of straw are frequently piled up), the original invention may be due to the acuteness of some one who noticed the fortuitous production of this remarkable substance.

As Mr. Franks has remarked (*Art Treasures of the Manchester Exhibition*, Sect. "Vitreous Art"), the legend told us

by Pliny points both to the Phœnicians and to the Egyptians as connected with the early practice of glass making, and it seems very possible that the art may have been invented in Egypt and carried thence to Phœnicia, where, as Pliny tells us, a small spot at the mouth of the river Belus furnished sand which had sufficed to produce glass for many centuries. As the Venetians appear to have imported this sand in later times, it is probable that it supplied the silicious element of glass in unusual purity.

Egypt supplies us with the earliest positive evidences of glass making. Sir Gardner Wilkinson (*Popular Account of the Ancient Egyptians*, vol. ii., p. 59) mentions that glass bottles containing red wine are represented on monuments of the fourth dynasty, more than 4000 years ago; and, as has already been mentioned, in the tombs at Beni Hasan, dating from the reign of Osirtasen the First, at least 2000 years B.C., the process of glass-blowing is represented in an unmistakeable manner. (*Manners and Customs of the Ancient Egyptians*, vol. iii. p. 89.)

The earliest specimen of glass bearing an inscription from which its date may be ascertained, which has as yet been met with, is the lion's head (*vide* woodcuts) now in the Slade



Collection in the British Museum. It was found many years ago at Thebes by Signor Drovetti, and given by him to Mrs. Larking, the wife of J. W. Larking, Esq., then H. B. M. Consul at Alexandria, and passed from that family to the Slade collection. It is formed of opaque blue glass of a very bright and beautiful colour (as may be seen from a fractured part), but time has changed it externally to an olive green. Dr. Birch, has informed the writer that the hieroglyphics which are on the

underside consist of, on the right side an urceus wearing the "hut" or white crown of the upper world or upper Egypt, and representing the goddess Sati (Neno), on the left side an urceus wearing the teshr or red crown of the lower world or lower Egypt and representing the goddess Nat or Neith (Minerva), while the central form the prenomen of the Monarch Nuantef IV. of the 11th Dynasty (Lepsius *Königsbuch*, taf. lxviii. 761, taf. xi. 160), whose date according to Lepsius' chronology was B.C. 2423-2380.

A bead found at Thebes has been published by Sir Gardner Wilkinson (*Manners and Customs of the Ancient Egyptians*, vol. iii., p. 88), and by M. Sauzay (p. 7.), which bears the prenomen of Hatafu, a queen who is conjectured to have lived about 1450 B.C., it is of a dusky green glass, quite transparent, and is stated to have the specific gravity of bottle glass. It has been suggested that the material is not artificial glass, but obsidian, which abounds in Egypt and is occasionally to be found of this tint.

Many coloured fragments are found in the tombs of Thebes, and a vitrified coating, usually blue or green, was given to objects formed of earthenware and even of stone or granite.

It would seem that a high value was attached to coloured glass at an early date, vessels of fine opaque blue glass of Egyptian manufacture are found edged with a tolerably thick plating of gold; glass, if the Syrian, Greek, and Latin versions of the Old Testament are correct, is in Chap. xxvii., v. 17, of Job, placed in the same category as that precious metal; our version renders the word, crystal.

As the objects of glass of Egyptian fabrication rarely bear inscriptions,¹ it is not easy to trace the progress of the art in that

¹ M. Deville (*Hist. de l'Art de la Verrerie*) has given engravings (p. iv) of a goblet with darkish festoons, and the cartouche of Thoutmes III. (*circa*

country, but as they are met with not unfrequently in tombs in Egypt, it is probable that the manufacture continued to flourish as well during the period of the native monarchy as in that of the Greek dynasty;¹ its importance after the subjugation of that country to Rome was probably even increased by the new market thus opened for its products. Martial alludes to this importation in the epigram (Book xii. 74)—

Cum tibi Niliacus portet crystallæ catapulus,
Accipe de circo pocula Flaminio.

Hadrian, in a letter addressed to the Consul Servianus, when enumerating the chief industrial occupations of the inhabitants of Alexandria, includes among them that of glass-blowing.²

The manufacture was not, however, confined to Alexandria, for we are told in the *Periplus Maris Erythræi*, that among the articles imported into various emporia on the Red Sea, were many sorts of glass and murrhine vases made at Diospolis.³

The ordinance of Aurelian, that glass should form a part of the Egyptian tribute, shows that the manufacture in that country and the importation into Rome continued in the latter part of the third century.

That there was considerable similarity between the glass manufactures of Egypt and of Phœnicia may be inferred, among other circumstances, from the accounts we have of immense statues and obelisks in both countries, said to be of emerald, but no doubt of green glass. Herodotus (Lib. ii., c.

1600 B.C.?), and of a very elegant vase of pure crystal glass, bearing the cartouche of Amenret.

¹ A curious illustration of this is the account given by Strabo of the body of Alexander having been placed in a sarcophagus of glass. Strabo, lib. xvii., p. 795.

² "Alii vitrum conflant."

³ *Per. Mar. Erythr.*, c. 6. "λίθιας

"θαλής πλείονα γένη καὶ ἄλλης μορφῆς
"της ἐν Διοσπόλει" were among the importations into an emporium in the territory of Zoscales, perhaps Massawah. According to Dr. Vincert (*Commerce and Navigation of the Ancients*, vol. ii., app., p. 730), this is not Thebes, but the lower Diospolis, in Lower Egypt, on Lake Menzaleh.

44) tells us that he saw in the temple of Hercules at Tyre a statue or column of emerald ; Pliny mentions, on the authority of Apion, a statue of Serapis thirteen feet and a half high in the Egyptian labyrinth, and, on the authority of Theophrastus, an obelisk sixty feet high, composed of four emeralds, in a temple of Jupiter in Egypt.¹ It is probably not safe to assume that all glass objects found in Egyptian tombs were really made in Egypt, but many specimens found both there and elsewhere bear unmistakeable marks of the art of that country (for instance, Fig. 1, Pl. I.), and this is equally true of the manufacture of the three or four centuries before, as of the three or four after, Christ.

The common Egyptian glass is of dusky green colour,² and shows little mark of disintegration, partly, no doubt, in consequence of the dryness of the climate.

The analyses made by Professor John, of Berlin, given by Von Minutoli (*Ueber die Aufertigung der farbigen Gläser beiden Alten*, Berlin, 1836, p. 35), show that blue opaque glass found at Memphis owed its colour to copper ; some other specimens of a like kind contained copper, with traces of iron ; semi-transparent blue from Memphis was coloured by cobalt ; violet also from Memphis with manganese ; and black with iron ; the semi-transparent blue also contained some lime. Sir Humphry Davy's examinations show like results ; he found copper in Egyptian blue and green pastes, but he says that the transparent blue vessels found in Magna Græcia owed their colour to cobalt.³

What has been said above applies solely to glass undoubtedly of Egyptian origin. It would seem, however, that

¹ Pliny, lib. xxxvii., c. 5, § 19.

² See Wilkinson's *Manners and Customs of Ancient Egyptians*, vol. iii., p. 49.

³ See a paper by Professor Buckman, *Archæological Journal*, vol. viii., p. 351.

the same processes were employed in Phœnicia and Egypt some centuries before Christ, and in Phœnicia, Egypt, and Rome, for some centuries after. It will be more convenient, therefore, to speak of the processes common to the two former countries when treating of Phœnician, and of those common to all three when speaking of Roman glass.

Next in date to the earlier Egyptian examples mentioned above, would appear to be the vase of transparent greenish glass found in the north-west palace of Nineveh, and now in the British Museum. On one side of this is engraved a lion and a line of cuneiform characters, in which is the name of Sargon, King of Assyria, B.C. 722. Fragments of coloured glasses were also found there, but our materials are too scanty to enable us to form any decided opinion as to the extent to which the art was carried in Assyria. Many of the specimens discovered by Mr. Layard at Nineveh have all the appearance of being Roman, and were no doubt derived from the Roman Colony, Niniva Claudiopolis, which occupied the same site.

It seems probable that the earliest products of the industry of Phœnicia in the art of glass-making, are the coloured beads, such as No. 1062. '68, which have been found in almost all parts of Europe, in India, and other parts of Asia, and in Africa. The "aggry" beads so much valued by the Ashantees,¹ and other natives of that part of Africa which lies near the Gold Coast, have probably the same origin. These coloured beads are usually of opaque glass; they exhibit great variety of colour and pattern, and very different degrees of skill in manipulation. Their wide dispersion may be referred with much

¹ According to Mr. F. Boyle (Through Fanteeland to Coomassie, p. 387) aggrys are, on the Gold Coast, worth about their weight in gold; the yellow varieties are the most esteemed, on the ground colour are stripes, spots, rosettes,

and something like flowers. They are said to be found in the earth as are also the beads called Popo, which Mr. Boyle describes as "blue in shadow, "yellow in the light."

probability to their having been objects of barter between the Phœnician merchants and the barbarous inhabitants of the various countries with which they traded. It is probable, however, that many of the specimens which exist in our museums date from times several centuries later than those in which Tyre and Sidon flourished; for, as we may learn from the *Periplus* and from Strabo, glass in various forms was an article imported in the first and second centuries, as well into the emporia of the Red Sea, as into the ports of Britain.¹ Even at the present day, beads are made at Venice for export to Africa, which bear a resemblance, doubtless not accidental, to those which we have reason to believe to be of very early date. Professor Buckman has given in the *Archæological Journal* (Vol. VIII., p. 351) an analysis of a bead found in an ancient British tumulus in Wiltshire; it was of a Prussian blue colour with white rings, and contained silica, potash, soda, alumina in small quantity, traces of lime and magnesia, oxide of iron, and oxide of copper.²

Many of the beautiful little vases found in tombs in the countries whose coasts are washed by the Mediterranean, and which are generally called Greek, are, there is good reason to think, the products of Phœnician industry. M. Labarte, indeed, considers it certain that manufactories of glass vessels were established, at a very remote period, in Sicily, the islands of the Archipelago, and Etruria. The close similarity, however, of the vessels of this class to each other, whether found in the Greek islands, in Egypt, or in Italy, would lead us rather to suppose that they were produced in a few contiguous cities

¹ Glass wares are often mentioned in the *Periplus Maris Erythræi*, when the imports into emporia of the Red Sea are described. Strabo, when writing of the imports into Britain, mentions *καλὰ σκεύη* (Lib. iv., c. 5, § 3). His words are somewhat ambiguous, and it

has been supposed that these articles of glass were exports from Britain, but it is much more probable that they were imports.

² On the subject of beads, see a memoir by J. V. Akerman, in *Archæologia*, Vol. xxxiv., p. 46.

than in many places widely separated from each other. In the latter case, the difference of materials within reach could scarcely fail to cause appreciable dissimilarity in the products, even if the makers were colonists of one and the same original stock.

The vases of this class (*see* Pl. I., Figs. 2, 3, and Pl. II.) have usually the forms of either *alabastra* or *amphoræ*; the prevailing colour is a deep transparent blue, but not unfrequently the colour of the body of the vase is some shade of pale buff, fawn, or white (an imitation more or less exact of arragonite or Egyptian alabaster), sometimes deep green, and, in rare cases, red. In almost every example the surface is ornamented by bands of colour, white, yellow, or turquoise blue,¹ forming zigzag lines; in some there are only two or three such lines, and in others the whole surface is covered by them. These lines are incorporated with the surface of the vessel, but do not penetrate through its entire thickness. Examination of the interior will, in many cases, show that it is rough and bears the appearance of having been moulded upon a core of sand; this, however, appears to be less clearly so when the example is of a characteristically Egyptian form and colouring, and has been found in Egypt. It is, however, difficult to find a sufficient number of fractured specimens to allow a decided opinion to be formed on this point.

By far the greater number of the vessels of this class which are preserved in museums will be found to bear forms much more Greek than Egyptian, as that of the *ænochoe*, with a trefoil lip and a handle. No. 1047. '68 (Pl. I., Fig. 1) of this collection, however, affords an example quite Egyptian in character, and in the British Museum are several like specimens.

By the Greeks and Etruscans they were evidently much valued; the *amphoræ* have been occasionally found in tombs, furnished with a stand of gold, similar to that described under No. 10 in the Catalogue of the Slade Collection. In Rhodes

¹ Due, it would appear, by Sir H. Davy's analysis, to cobalt (*see ante*, p. xii.).

and elsewhere they have been found associated with objects which make it probable that they do not date from an earlier period than the third or fourth century before Christ, and it does not appear that they are met with in tombs later than the Christian era; when coloured or ornamented glass vessels are discovered in these last, they are of a different character.

In Etruscan tombs in Italy are also found glass vessels of a different character; these are small bowls resembling in form the half of an egg; they are usually of the variety of glass which is mentioned further on as "madrepore," the ground green and transparent, the stars yellow, patches of colour, of gold and of filigree glass are sometimes interspersed. They differ from, and appear to be earlier than the madrepore glass, fragments of which are so often found in Rome. They are also said to be found in Magna Græcia. Another variety found in tombs in the same district is of blue and opaque glass, with much[†] gold leaf, the whole twisted together; the most frequent form in which this kind of glass has been found is that of a bottle several inches long and about one inch in diameter, without a neck, having probably had a mounting of gold. Both these varieties are possibly the product of Phœnician workshops, though they are usually classed with Roman glass. Of the bowls, Nos. 970. '68 and 971. '68 are examples; of the other class, No. 1023. '68.

The Greeks of the period anterior to our era do not seem to have much cultivated the art of glass-making. Herodotus no doubt refers to the substance under the name λίθινα χυτὰ, molten stones, with which he says (Book ii., cap. 69) the ears of the sacred crocodiles in Egypt were adorned, but as he does not use the Greek word ὑαλός, and writes of the emerald column which he saw at Tyre as if it had been a real emerald, it may be inferred that he was not in reality conversant with or well-informed as to the real nature of glass.

The earliest Greek writer who has been observed to use the word *ύαλος*, is Aristophanes, who, in the *Acharnians* (v. 74), makes the Athenian ambassadors sent to Ecbatana assert that they drank there from cups of gold and of glass, and in the *Clouds* (v. 758) he describes the effect of a burning glass. As, however, in the latter passage the material is said to be a transparent stone bought in the apothecaries' shops, it has been doubted whether glass was really meant. Claudian's assertion that Archimedes made a sphere of glass at Syracuse (Ep. in Sphæram Archimedis) can hardly be admitted as an historical proof of the manufacture of glass at that period in that city.

Glass, however, was occasionally used for purposes of architectural decoration during the best period of Grecian art, for Stuart and Revett, when describing the temple of Minerva Polias at Athens, give the following note¹:—"A remarkable singularity observed in the capitals of this portico is in the plaited torus between the volutes having been inlaid at the interstices with coloured stones or glass." Mr. H. March Phillips informed the writer, when calling his attention to this passage, that he well remembers having remarked these decorations, and that he believes them to be of blue glass.

An example of the employment of glass in a like manner is indicated by the odd story which Pliny tells (*Nat. Hist.*, Lib. xxxvii., cap. v.²) that on the tomb of Hermias, a prince of the island of Cyprus, was a marble figure of a lion with eyes of emerald which shone so brightly into the sea that they frightened away the tunnies from the adjacent fisheries, so that it became necessary to change the eyes. In the great marble lion discovered by Mr. Newton in the island of Cnidus, and now in the British

¹ *Antiquities of Athens*, Vol. ii., p. 73, note a.

² Ferunt in ea insula (Cyprus) tumulo regali Hermias juxta cetarias marmoreo leoni fuisse inditos oculos e smaragdis ita

radiantibus etiam in gurgitem ut territi thynni refugerent, diu mirantibus novitatem piscatoribus donec mutavere oculis gemmas.

Museum, in the place of the eyes are deep sockets which probably, like those of the Cypriote lion, were filled with coloured glass (Newton, Travels, &c. in the Levant.)

GLASS IN THE ROMAN EMPIRE.

The increasing wealth and luxury of Rome which accompanied the establishment of the empire, had among their more important effects that of stimulating the manufacture of glass, and this ultimately reached a point of development which in some respects has never been excelled nor even perhaps equalled. It may appear a somewhat exaggerated assertion that glass was used for more purposes, and in one sense more extensively by the Romans of the imperial period than by ourselves in the present day; but it is one which can be borne out by evidence. It is true that the use of glass for windows was only gradually extending itself at the time when Roman civilization sank under the torrent of German and Hunnish barbarism, and that its employment for optical instruments was only known in a rudimentary stage; but for domestic purposes, for architectural decoration, and for personal ornaments, glass was unquestionably much more used than at the present day.

That glass was highly and deservedly esteemed as a material of what we should now call works of vertu, is evidenced by the high prices paid for fine examples (for instance, the 6,000 sesterterii which Pliny tells us were paid, in the time of Nero, for two small vases¹), and also by the interest several emperors took in the products of the manufacture; among these we may specially notice Tacitus, a man of letters and a collector, of whom Vopiscus tells us that "*vitreorum operositate atque diversitate vehementer est delectatus.*"² The Portland vase

¹ Neronis principatu reperta vitri venderet. Plin. Nat. Hist., Lib. xxxvi. arte, quæ modicos calices duos, quos cap. 26. appellabant pterotos, ns. sex millibus

² Vopiscus, in vitâ Taciti.

in the British Museum and the vase in the Museo Borbonico at Naples, to mention one kind of glass manufacture alone, show how well deserved was the admiration which was bestowed upon such objects by the dilettanti of Rome.

These and similar vessels, sculptured like cameos, are perhaps the most beautiful objects which the glassmakers of any period have produced, but many vessels of white glass, or of glass of only one colour, show the greatest elegance of form, and the ingenuity and invention which devised so many modes of ornamentation and so many shades of colour, and the skill with which the manual execution is carried out, alike deserve great admiration. This prodigious variety seems to show that glass-making was at that time carried on, not as now in large establishments, which produce great quantities of articles identical in form and pattern, but by many artificers, each working on a small scale. This circumstance enables us to understand why very pure and crystalline glass was, as Pliny tells us, more valued than any other kind. To produce glass very pure and free from striæ and bubbles, long-continued fusion in large vessels is required; this the system of working of the ancients did not allow, and their glass is in consequence remarkable for the great abundance of bubbles and defects which it contains.

Glass was used at Rome in prodigious quantities; even now, after the lapse of some 1,300 or 1,400 years, the abundance of fragments of coloured glass (to say nothing of uncoloured) which are found in and around the city is surprising; the writer, during about four months of a residence in Rome in the winter of 1858-1859, saw in the hands of the dealers in antiquities fragments of at least 1,000 to 1,200 vessels of coloured and ornamented glass, for the most part, the crop, so to speak, of that season. Among these were fragments of at least ten or twelve vessels with white figures in relief on a blue ground, of

the same kind as the Portland vase, and in this collection are specimens of a like character.

It is not, however, surprising that coloured and ornamental glass should have been very largely used among the Romans for all those domestic purposes in which a decorative effect is desired, such as table services, vessels for toilet use, and the like, when it is remembered that porcelain was not then invented, and that Samian ware was the most decorative kind of pottery which was at their command. The brilliancy of glass as regards both surface and colour, made it attractive, and fashion caused it to be preferred even to the precious metals,¹ excepting indeed by the Emperor Gallienus, of whom Trebellius Pollio observes as a remarkable circumstance, that he drank from golden cups, despising glass, than which, he said, nothing was more vulgar.²

As has been said above, the invention and ingenuity employed by the Roman artisans in producing variety in glass vessels are most remarkable; almost every means of decoration appears to have been tried, and many methods of manipulating glass, which have been considered inventions, have in reality been anticipated by the glass-workers of the period under consideration. It seems probable that many of the ingenious processes of the Venetian glass-makers were suggested to them by the examination of ancient examples.

In order to appreciate fully the skill of the glass-makers of the Imperial period, it is necessary to study not only the entire vessels which have been preserved, but also the fragments which, as has been stated above, are found so abundantly in the ruins of Roman cities. Entire vessels of an ornamental character are comparatively rare, for though urns of common uncoloured glass are frequently met with as receptacles of the ashes of the

¹ *Ufus vero ad potandum argenti metalla et auri pepulit.* Plin. Nat. Hist., Lib. xxxvi., c. 26, § 67.

² "Nihil esset eo communius." Treb. Pollio, in vitâ Gallieni.

dead, it was not usual to place precious vessels in sepulchres at this period; some few, however, have been thus preserved to us, one instance being the Portland vase deposited in a sarcophagus which has been supposed to have been that of Alexander Severus. A certain number of ornamental vases have been found at Pompeii and Herculaneum, and a very few, after centuries of wreck and devastation, have survived in the treasury of some church or convent.

According to Pliny,¹ glass was originally made from sand and natron alone; but afterwards the "*magnes lapis*," possibly manganese,² was added, and then many kinds of shining pebbles, "*calculi splendentes*," shells, and various sands dug up from the earth, "*fossiles arenæ*." In India, he says, crystal was employed, and hence that no glass was to be compared with the Indian. During the melting "*cyprium*" was added, and "*nitrum*," especially the "*Ophirium*." By the former copper is generally to be understood, but chalk or some other mineral

¹ *Mox ut est ingeniosa sollertia non fuit contenta nitrum miscuisse cœptus addi et magnes lapis quoniam in se liquorem vitri quoque ut ferrum trahere creditur. Simili modo et caleuli splendentes multifariam cœpti uri dein conchæ ac fossiles harenæ, auctores sunt in India e crystallo fracto fieri et ob id nullum comparari Indico. Levibus autem aridisque lignis coquitur addito Cyprio ac nitro maxime Ophirio continuis fornacibus ut cæs liquatur maffœque fiunt colore pingui nigricantes. Ea massa rursus funditur in officinis tinguaturque et aliud flatu figuratur aliud torno teritur aliud argenti modo cœlatur. Sidone quondam his officinis nobili siquidem etiam specula excogitaverit. Hæc fuit antiqua ratio vitri jam vero et in Volturno amne Italiæ harena alba nascens sex M pass: litore inter Cumas atque Liternum qua mollißima est pila molaque teritur dein*

miscetur tribus partibus nitri pondere, vel mensura ac liqueata in alias fornaces transfunditur. Ibi fit massa quæ vocatur hammonitrum atque hæc recoquitur et fit vitrum purum ac massa vitri candidi. Jam vero per Gallias Hispaniasque simili modo harena temperatur. Plin. Nat. Hist., Lib. xxxvi., c. 26, § 66.

² *See Beckman's Hist. of Inventions, Vol. iv., p. 59. "Magnes lapis" is generally held to mean loadstone, an ore of iron; but an ore of manganese greatly resembles loadstone, and it is possible that the use of manganese, the soap of glass, as it has been called, in removing the colours produced by iron and other metallic impurities in the pot-metal had been already discovered. Pliny would seem to have attributed to the magnes lapis a power of making glass more liquid.*

obtained in Cyprus may be here intended. What is meant by "Ophirium" is not certainly known, but it may indicate a kind of nitre brought from Ophir. Such, he says, was the "antiqua ratio vitri," and he seems to imply that at Sidon glass was made in this manner. In his own time, a fine white sand was found on the shore between Cumæ and Liternum, which was pulverised, mixed with three parts of "nitrum," and twice melted. It was then called "ammonitrum," which being again melted became "Vitrum purum ac massa vitri candidi." He adds, that in Gaul and in Spain sand was similarly treated. The lumps of glass so obtained, were, it would seem, brought to Rome, and there mixed with the colouring ingredients and re-melted.

A passage in Strabo's Geography (Lib. xvi., c. 2, § 25) is worth notice with reference to the practice of glass-making at Rome; he says, that he had heard from the glass-makers at Alexandria, that a certain earth was found in Egypt without which the more elaborate and many-coloured wares could not be made; and it was said that at Rome many things were to be procured which facilitated both the colouring and the working, and the giving it a crystalline appearance; inasmuch that a cup might be bought there for a small piece of copper money.

The coloured and variegated glass and glass vessels made in Rome seem to have been articles much exported; for fragments have been found at Cimiez near Nice, at Nîmes, and in London, of shades and mixtures of colours, and of patterns so precisely the same as those found at Rome, as to render it almost certain that they were all made at one and the same place. We may see from Pliny's notice of glass (Nat. Hist., Lib. xxxvi., c. 67) that many varieties were produced in his time; he tells us of an opaque red (*totum rubens vitrum atque non translucens, hæmatinum appellatum*), of white glass, and of glass imitating murrhine, jacinths, sapphires, and all other colours (*album et murrhina, aut hyacinthos sapphiroque imitatum, et omnibus aliis coloribus*). He also makes special mention of black glass,

like obsidian, which was used for vessels on which to serve food (*fit et tincturæ genere obsidianum ad escaria vasa*).

Of many of these kinds examples may be seen in this collection, with the possible exception of the murrhine. The question as to what the real murrhine was, has often engaged the pens of classical scholars, but has never been satisfactorily solved. Some light may perhaps be obtained by comparing the description, which Pliny gives, with specimens of ancient glass among which we might fairly expect to discover the imitation murrhine. Pliny tells us that the colours of the real murrhine were purple, white, and a third "*ex utroque, ignescente veluti per transitum coloris purpura aut rubescente lacteo*." Now among the fragments of glass found at Rome and elsewhere, specimens are occasionally to be met with of a very beautiful transparent purple, mixed with veins and lines of opaque white; where this white has a thin covering of the purple glass, a colour is seen which corresponds with Pliny's description.¹ It has been thought that by murrhine the ancients meant fluor spar, but no glass has been noticed which resembles this substance. The kind of glass, however, which Pliny speaks of as most highly esteemed in his time was the pure white, imitating crystal; this it may have done, not only in colour and transparency, but also in thickness. Pliny says, "*Maximus honos in candido translucentibus quam proxima*" "*crystalli similitudine*" (*Lib. xxxvi., c. 67*).

The Romans had at their command, of transparent colours, blue, green, purple or amethystine, amber, brown, and rose

¹ The most probable opinion seems to be that the real murrhine was a variety of agate (*see King's History of Precious Stones and Gems, p. 239*), containing shades of red or purple. It is possible that those red or purple shades were produced by heat, or other artificial means, as it is practised so

largely at the present day in India and in Germany, both with onyxes and crystals, and this may explain the line in Propertius, Book iv., c. 5, v. 26—

"*Murreaque in Parthis pocula cocta focis.*"

See on this subject a paper by Mr. Maskelyne, *Proc. of the Society of Antiquaries*, January 28, 1869.

colour; of opaque colours, white, black, red, blue, yellow, green, and orange. There are many shades of the former as well as of the latter, particularly of transparent blue, and of opaque blue, yellow, and green. Of opaque colours many varieties appear to be due to the mixture of one colour with another. In any large collection of fragments, it would be easy to find eight or ten varieties of opaque blue, ranging from lapis lazuli to turquoise or to lavender, and six or seven of opaque green. Of red the varieties are fewer; the finest is a crimson red of very beautiful tint, and there are various gradations from this to a dull brick red. One variety forms the ground of a very good imitation of porphyry, and there is a dull semi-transparent red which, when light is passed through it, appears to be of a dull green hue.

The analyses of antique glass of this period, given by Von Minutoli (p. 31), which were made by Klaproth, show the following results. No attempt to determine the quantities of alkalies, it should seem, was made.

OPAQUE RED FROM THE VILLA OF TIBERIUS AT CAPRI.

In 200 grains, Silica	-	-	-	142 grains.
Oxide of lead	-	-	-	28 „
Do. copper	-	-	-	15 „
Do. iron	-	-	-	5 „
Alumina	-	-	-	2 „
Lime	-	-	-	3 „
				<hr/>
				195 „
				<hr/>

OPAQUE GREEN.

In 200 grains, Silica	-	-	-	130 grains.
Oxide of copper	-	-	-	20 „
Do. lead	-	-	-	15 „
Do. iron	-	-	-	7 „
Lime	-	-	-	13 „
Alumina	-	-	-	11 „
				<hr/>
				196 „
				<hr/>

PARTIALLY TRANSPARENT BLUE FROM CAPRI.

In 200 grains, Silica	-	-	-	163 grains.
Oxide of iron	-	-	-	19 „
Alumina	-	-	-	3 „
Oxide of copper	-	-	-	1 „
Lime	-	-	-	0.5 „
				<hr/> 186.5 „ <hr/>

Another specimen of blue Roman glass, analysed by Professor John, showed the presence of cobalt.

It has been ascertained that the rose-coloured glass owes its colour to gold, the violet to manganese, the white and orange to oxides of tin and of arsenic. A specimen of fine opaque red lately analysed in London proves to be coloured by iron.

With these colours the Roman *vitarius* worked, blending them in almost every conceivable combination, sometimes, it must be owned, with a rather gaudy and inharmonious effect.

These combinations of colour were effected in two ways: first, by glasses of two or more colours being combined so as to traverse the entire substance of the object; and, secondly, by the superposition of the one colour on the other.

To the former class belong all those termed mosaic and mille fiori, where the process of manufacture was the preliminary union, by heat, of threads of glass into a rod, which when cut transversely exhibited the same pattern in every section. Such rods were often placed together side by side, and united by heat. This process was no doubt first practised in Egypt, and is never seen in such perfection as in objects of a decidedly Egyptian character in design or in colour, such as No. 95 of the Catalogue of the Slade Collection. Very beautiful pieces of ornament of an architectural character are met with, which probably once served as decorations of caskets or other small pieces of furniture, or of trinkets; also tragic masks, human faces, and birds. Some of the last-named are represented with such truth of colouring and delicacy of detail, that even the

separate feathers of the wings and tail are well distinguished, although the piece which contains the figure may not exceed three-fourths of an inch in its largest dimension.¹

The patterns were made first on a large scale, then the glass rod, when hot, was drawn out until its diameter was reduced to the size we see. That such was the case is evident from a careful examination of some of the pieces, as the work is evidently more minute than human powers could otherwise accomplish; *e.g.*, in an example in the British Museum, No. 93 in the Catalogue of the Slade Collection, where are represented a small human bust and head, with a lock of hair hanging over the forehead; this lock is not much broader than a horsehair, yet, when examined with a powerful lens, it is seen to be composed of nine threads alternately of transparent and opaque glass.

Although, as before noted, the finest works of this description were made by Egyptian craftsmen, many of those found at Rome were probably made there, and fragments of the rods are occasionally discovered. One of these, in the possession of the writer, is quadrilateral, about $\frac{3}{4}$ inch square, and shows a four-leaved flower of turquoise blue, with a yellow centre, on a ground of opaque red.

The same process was used in the manufacture of objects much larger than those mentioned above, and plates 4 to 6 inches square are met with. The execution of these is much less minute and delicate; the subjects usually found on them are flowers, particularly poppies, ears of corn, and the like.

A very few examples have been noticed of a process of the same nature, but somewhat differently managed. In this the figure does not penetrate through the entire substance of the vessel, but is inlaid in a cavity hollowed out to receive it to

¹ An exquisite specimen, a figure of a human-headed hawk, is in the British Museum. It came from the Townley Collection, and formerly belonged to the Duchess of Portland.

the depth of about $\frac{1}{16}$ of an inch. The only specimens which have been met with represent fishes on a ground of opaque turquoise blue;¹ one specimen has the head and about half the body of a fish, which if entire would measure 3 to $3\frac{1}{2}$ inches in length. It is executed with the greatest minuteness; the teeth, divisions of the fins, and those of the eyeball and eye, being represented with great truth both of form and colour.² These figures might have been executed in two ways, either by making a rod or cane of the required form and cutting off transverse sections, which being placed in the cavities prepared for them, were fixed by the action of the furnace, or the cavity may have been prepared, the various colours placed in their proper situations in the condition of powder worked into a stiff paste with some suitable vehicle, and an amount of heat applied sufficient to unite them and cause them to blend, without producing liquefaction.

A somewhat similar result was also obtained by different means, which it may be worth while to describe at more length, as it may afford a useful hint to artists in mosaic. The variously-coloured glasses were broken or cut into fragments of suitable sizes and forms, placed together and a mass of heated glass poured or pressed on the back; thus the pieces were united and in some degree blended together, and a figure was obtained with less of hardness than a mosaic, and more of the effect of a painting. In the possession of the writer is the upper half of the head of a female figure formed by this process, which when entire must, if standing, have been not less than 15 inches high. Such figures, it would seem, were then used in the "opus sectile" or marquetry with which walls were covered.

¹ For specimens of this kind, see Buonarrotti, *Osservazioni sopra alcuni Medaglioni Antichi*, p. xvii.

² This example was seen by the

writer at Rome, in 1859. It was then in the possession of a Belgian artist, Mons. Brûls.

A common variety of mosaic glass is that which was made by combining square sticks of various colours, the effect produced being that of tessellated work. Small cups were made of this pattern, but only in very rare cases of the more artistic patterns.

In the Louvre is a mass of this tessellated pattern, which, being rounded at one end, seems to show that the sticks of which it is composed were placed together in a small pot and there heated until they cohered.

A vast quantity of bowls, cups, and pateras were made by the same means in patterns which bear considerable resemblance to the surfaces of madrepores (*see* Nos. 970, 971, and 973. '68.), and are of the same kind as those which by the Venetians are termed "mille fiori." In these, every colour and every shade of colour, seem to have been tried in great variety of combination with effects more or less pleasing; but transparent violet or purple appears to have been the most common ground colour. Although most of the vessels of this mille fiori glass were small, some were made of large size; a fragment in the possession of the writer must have formed part of a dish not less than twenty inches in diameter.

The slab, No. 1077. '68, Fig. 3, in Pl. IV., is an example of this kind of glass.

Another variety of glass, evidently much used, is that in which transparent brown glass is so mixed with opaque white and blue as to resemble onyx. This was sometimes done with great success, and very perfect imitations of the natural stone were produced; Plate III., Fig. 3, furnishes a kindred example. What has been noticed above as possibly imitation murrhine (p. xxiii) is a variety of this kind, in which purple or violet glass takes the place of brown.

Imitations of porphyry, of serpentine, and of granite are also met with; but the use of these seems to have been almost confined to pavements, and the decoration of walls, for which purposes the onyx-glass was likewise employed.

Under this head must also be included the interlacing of bands and threads both of white and of coloured glass. Vessels are found composed either of bands so placed in sections as to present a plaited pattern, as No. 969. '68 (Pl. V.), or simply arranged side by side; others, again, resemble the Venetian *vitro di trina*, threads of opaque white or yellow glass being twisted with clear transparent glass, and the vessel then formed by the welding together of the rods so made (*see*, for instance, Fig. 2, Plate III.). Blue threads are occasionally intermixed, and several varieties of pattern may be found; but this branch of the art does not appear to have been carried by the Romans to anything like the perfection to which it was afterwards brought by the Venetians.

Pieces of gold leaf are sometimes introduced between the layers of glass, and these are frequently seen combined with the bands of colour which have just been mentioned.

To the second branch of decoration by colour, viz., that by superposition, belong, in the first place, the cameo glasses, such as the famous Portland vase, in which a paste of one colour has been placed over another, and then carved into the required design; this, no doubt, is what Pliny meant to describe when he says "*aliud argenti modo cœlatur.*" The sculpturing was, no doubt, mainly executed by the lapidary's wheel, but the work may have been finished with the help of a diamond, or by attrition with a file composed of emery or adamantine spar, formed into a mass with pitch or some other resinous substance, like the corundum file of the present day. Pliny, it would seem, wished to distinguish between that which was merely mechanical work executed by a wheel, and that which required the manipulation of the skilled artist, for he says "*aliud torno teritur, aliud argenti modo cœlatur,*" the first being what we should call cut glass, the second the cameo glass described above.¹ Roman silver, it may be observed, was often

¹ Apuleius, *Met.* ii. 33, uses the expression, "*vitrum affabre figillatum.*"

found at Pompeii in the house of the Faun. It also has been engraved by Richardson.

Mr. Deville, "*Hist. de l'Art de la Verrerie*," has engraved (Pl. LXIII.) a very beautiful lamp of blue glass, with a wreath, a bust of Harpocrates, and the inscription, "*Deo qui est Maximus*," in white cameo.¹

Costly as these beautiful objects must have been, a very great number of them existed, for even now fragments of ten to fifteen may probably be met with in the hands of the curiosity dealers in Rome in the course of three or four months. The same process was used in producing large tablets, employed, no doubt, for various decorative purposes. No. 1074. '68, in this collection is a fragment of such a tablet or slab, the figure, a portion of which remains, could not have been less than about 14 in. high.

The ground of these cameo glasses is most commonly transparent blue (often lined with opaque white to throw up the colour), but sometimes opaque blue, purple, or dark brown. The superimposed layer which is sculptured is generally opaque white. A very few specimens have been met with in which several colours are employed.²

At a long interval after these beautiful objects come those vessels which were ornamented either by means of coarse threads trailed over their surfaces and forming rude patterns, or by coloured enamels merely placed on them in lumps, and these, doubtless, were cheap and common wares. But a modification of the first-named process was in use in the fourth and succeeding centuries, showing great ingenuity and manual dexterity; that, namely, in which the added portions of glass are united to the body of the cup, not throughout, but only at points, and then shaped either by the wheel or by the

¹ Mr. Deville does not state where the original is preserved. Can the engraving have been made from a drawing of a piece of Wedgwood ware?

² See a remarkable specimen in *Curiosities of Glass-making* by Apsley Pellatt, Plate V., Fig. 1, composed of five layers.

hand. The attached portions form in some instances inscriptions, as on a cup found at Straßburg, which bears the name of the Emperor Maximianus (A.D. 286-310); on another in the Vereinigte Sammlungen at Munich, and on a third, in the Trivulzi Collection at Milan, where the cup is white, the inscription green, and the network blue.¹ Probably, however, the finest example is a *fitula*, 10½ in. high by 8 in. wide at the top and 4 in. at the bottom, preserved in the treasury of St. Mark at Venice. This is of glass of a greenish hue; on the upper part is represented, in relief, the chase of a lion by two men on horseback accompanied by dogs; the costume appears to be rather Byzantine than Roman, and the style very bad. The figures are very much undercut. The lower part has four rows of circles united to the vessel at those points alone where the circles touch each other. All the other examples have the lower portion covered in like manner by a network of circles standing nearly a quarter of an inch from the body of the cup.

An example connected with the specimens just described is the cup belonging to Baron Lionel de Rothschild;² though externally of an opaque greenish colour, it is by transmitted light of a deep red, the colouring matter, Mr. Franks observes, being probably copper, but the glass has not been brought to the state in which it becomes ruby. On the outside, in very high relief, are figures of Bacchus with vines and panthers, some portions being hollow from within, others fixed on the exterior. The changeability of colour may remind us of the "*calices versicolores*," which Hadrian sent to Servianus. This and the preceding ought, according to the system of classification which has been adopted, to have been noticed with vessels

¹ Engraved in Winkelmann, *Storia delle Arti*, i., p. 42. A fragment of a cup of this kind is in the British Museum.

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² An engraving of this cup will be found in De la Motte's "*Choice Examples of Art Workmanship*."

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owing their decoration to form and not to colour, but it seems scarcely advisable to attempt to classify with strict accuracy.

Vessels are also found on which coloured enamels have been dashed in spots entering slightly within the surface (No. 1005. '68.); these are but common and ordinary objects exhibiting little or no art, still they seem to have some bearing upon the interesting question whether enamel painting upon glass was practised by the Romans. The above-mentioned is a coarse and imperfect sort of enamelling, and it was probably executed by means of enamel liquified by heat, not reduced to a fine powder and applied cold, the only means by which delicate execution can be obtained. It is, however, unlikely that when so near an approach had been made to the art of enamelling, the last step was not taken by artists so ingenious and so desirous of novelty as were the Roman, and several objects are extant, or have been described, which bear traces of the process. One specimen is in the Slade Collection (No. 84), on which is a figure of a gryphon, drawn apparently in a dark enamel colour. In the Louvre is a small cup of green transparent glass, about three inches in diameter, said to have been found at Nîmes; on this figures of animals and foliage drawn in yellow and red are discernible. Von Minutoli (p. 16) states that Canon Gorio, at Naples, shewed him a sketch of a patera which was found in the year 1819, at Cunæ, on which a landscape was painted in several colours with decorations in gold. This should now be in the imperial collection at Vienna. Boldetti (p. 189) states that in the cemetery of Callistus, in the catacombs, a cup was found, in the bottom of which the head of our Saviour was depicted, not in gold but in several colours. It is not at all surprising that few enamel paintings have been preserved, when it is remembered that almost all Roman glass is found buried in damp places, and much corroded on the surface, and that enamel colours corrode more readily than ordinary glass on

account of their containing a greater proportion of metallic oxides.

Decisive examples, however, are two cups found at Vafpelev, in Denmark, engravings of which are published in the "*Annaler for Nordisk Oldkyndeghed*" for 1861, p. 305. These are small cups, 3 in. and $2\frac{1}{2}$ in. high, $3\frac{3}{4}$ in. and 3 in. wide, with feet and straight sides; on the larger are a lion and a bull, on the lesser two birds with grapes, and on each some smaller ornaments. On the latter are the letters DVB. R. The colours are vitrified and slightly in relief; green, blue, and brown may be distinguished. They were found with Roman bronze vessels and other articles.

Cav. de Roffi has described and figured (*Boll. di Archeol. Crist. Ann.* 1873, tav. iii.) a circular plate of glass found affixed to the wall in an ancient sand-pit between the cemeteries of Thrasion and of the Jordani, a mile outside Rome on the Via Salaria. It measures $4\frac{1}{4}$ inches in diameter, but is only a portion of a much larger plate. On it are painted birds and fruits, not the Cavaliere says in enamel, but "simple painting" (*semplice pittura*), probably in tempera."

In the fourth and following centuries, pictorial representations were made by means of gold leaf, either embedded in the substance of the glass or fixed to its surface. Some hundreds of these have come down to us, in consequence of the Christians of those times having been in the habit of affixing the disks, which formed the bottoms of the vessels thus ornamented, to the exterior of the loculi in which the dead were placed in the catacombs. They offer a series of most curious and interesting representations, and have been well illustrated by Padre Garrucci in his work, entitled *Vetri Ornati di Figure in Oro* (Roma, 1858). Padre Garrucci is disposed to attribute them to the period between A.D. 200 and A.D. 400, but without strictly confining them within those limits.

The subjects are sometimes mythological, but most com-

monly Christian; on the latter the inscriptions BIBE VIVAS and PIE ZESES very generally occur, and it has been inferred from them that the vessels were used either for sacramental purposes, or in the celebration of agapes. When found entire, which is rarely the case, the vessels are in the form of shallow pateras or bowls.

The process of making them seems to have varied: in some, like the medallion No. 8990.'63 (Pl. IV. Fig. 2), a leaf of gold was fixed on the upper surface of the bottom of a vessel, the superfluous portions were removed, and lines traced through the gold until the desired pattern was obtained; a bowl was then superadded, and the whole united into one mass by fire. In a few instances, small portions of the ornaments or figures have colour added; red, lake, blue, white, and two shades of green were thus employed; of this No. 317 of the Catalogue of the Slade Collection is an important example.

Some of the vessels were decorated with small medallions, each of which forms a portion only of the subject represented, so that several were required to complete the design. In these the gold design is usually backed with coloured glass, either blue, green, violet, or crimson. The remains of a shallow dish found near Cologne (published in the *Jahrbücher des Vereins von Alterthumsfreunden in Rheinlande*, heft xxxvi. taf. 3), shews such an arrangement; of the small coloured medallions with which this was studded about twelve remain.

In other specimens, such as the fragment No. 120 of the Catalogue of the Slade Collection, and the remarkable dish just mentioned, the gold leaf seems to have been applied to the surface of the glass, and not protected by a second coating. Such specimens must have been, however, peculiarly liable to injury. Enamelled decoration was also occasionally added.

A very curious example was found some years ago at Cologne, in this, the real cup, about 3 in. high, is ornamented with winged genii and flowers in gold, this cup is enclosed

in a network of threads of glass, which join handles constructed in a like manner, the whole standing on a foot. This was lately in the possession of Herr Disch of Cologne. The threads of glass are in this instance not cut.

Many examples of this process are to be met with in which the drawing and execution are far superior to those of the majority; the first in correctness, the second in fine and careful shading, in which cross-hatching is sometimes seen (Nos. 1051. '68 and 1052. '68, belong to this class); one of the most remarkable, which is inserted in the Croce Magna at Brescia, has been supposed to represent the Empress Galla Placidia and her son. Some of these are very cleverly executed, though usually, according to Padre Garrucci, full of blunders as to costume, errors in inscriptions, &c. Many of them are probably the work of the clever forgers of the Italian renaissance, who caught the spirit of the antique so ably, that the objects which they produced in several classes of art have often deceived the most acute connoisseurs. Many of them were certainly in existence two or three centuries ago; Buonarrotti (*Osservazioni sopra alcuni frammenti di vetro*) has engraved several of these, in the opinion of Padre Garrucci, spurious objects, as genuine. That the artists of circa 1500 in Italy were quite capable of executing such work may be seen by many extant specimens, of which No. 3648-56 in this collection is a particularly fine example.

The processes which remain to be mentioned are those in which decorative effect was obtained by variety of form, and these are the two which Pliny has indicated in the words "*aliud flatu figuratur*," and "*aliud torno teritur*," the first including blowing and moulding, the last grinding and shaping on the wheel. Cameo glass, and that later kind in which portions are attached to the ground at points, only ought in strictness to have been spoken of under this head, but reasons of convenience have led to the arrangement adopted.

Variety of form was given by several processes connected with that of blowing; for instance, by moulding with pincers or other tools, by forming projecting ribs on the sides (now called pillar moulding), as well as by the use of moulds, probably of metal, into which the glass was either blown or pressed; bottoms of bottles and other vessels have often fishes, dragons, or birds thus formed. Cav. de Rossi has figured (*Bull. di Arch. Crist.* 1873, *tav. IX.*) a cup found in a tomb near Treves, on which are fishes, sepias, and shells, all it would seem moulded in very high relief and stuck on. A very similar cup was found in the cemetery of Calixtus, near Rome. Several cups or fragments of them have been found, on which are figures of gladiators with their names; on one such found at Chavannes in La Vendée are the names of Proculus, Columbus and Spiculus, mentioned by Suetonius as having lived in the time of Caligula and Nero. M. Deville has given a good example in his Plate XLIX. These cups were blown in a mould, not finished by any process of cutting or grinding, and evidently cheap common wares. Some beautiful examples of these processes will be found in this collection; among those blown into moulds were bunches of grapes, dates, and human heads, of various colours (*see Pl. IV., Fig. 1.*) Masks and ornaments were likewise often made in a mould and attached to vases, &c.; and one maker has recorded his name and abode, Artas Sidon, both in Greek and in Latin, the words appearing in relief on the handles of cups, as if formed by the use of pincers on which they had been engraved.

An elegant long-necked bottle, in the British Museum, seems to have been blown within a mould made by means of a cage of wire; this process has given to its surface little rounded elevations such as we see in the glass, which is now so common, and often called "kinkled."

A great number of vessels of various forms, whether cups, pateræ, or vases, were, after they were blown, finished by the

wheel, and afford beautiful examples of skill in manipulation, portions being often much undercut. The artisans known as *diatretarii* probably executed this work.¹ No. 8988. '63. (Pl. III. Fig. 1) is a very pleasing example of Roman glass-cutting.

The whole surface was also sometimes cut, not, as in modern times, into projecting pyramids, but into a series of indentations of a curvilinear form. In another class of examples, figures and ornaments were engraved in shallow *intaglio*; this was evidently done with the lapidary's wheel, and in a few instances (*e.g.*, a cup in the Museum at Cologne) details were added with the point of a diamond or other hard stone. Work of this kind is usually bad both in style and in execution, and evidently belongs to a late date; a fragment of a large patera or shallow bowl in the *Vereinigte Sammlungen* at Munich has engraved on it the *labarum* and the letters Alpha and Omega; but perhaps the most important specimen extant is a *fitula* of dark violet glass in the treasury of St. Mark, at Venice, on which a bacchanalian dance is represented. The manufacture of such specimens was probably continued under the Byzantine empire.

In the year 1868 some very remarkable examples of this kind of work were found at Porto, and have been figured and described by Cavaliere de Roffi (*Bull. di Archeol. Crist.* 1868), the most remarkable were fragments of a shallow patera which must have been about 8 in. in diameter, on them is engraved in shallow *incavo* a standing figure of Christ between two saints, on another is a part of a figure of Christ represented in the act of delivering a tablet, inscribed *Lex Domini*, to a figure probably intended to represent St. Peter. These Cavaliere de Roffi is of opinion probably date from the fourth century.

¹ They are mentioned in the Codex (Lib. x. tit. 64) in the ordinance of Constantine II., A.D. 337. *Diatretum* occurs in the Digest of Ulpian. See Facciolati, *sub voce*.

The figures are engraved on the under side, so that the upper remains smooth and fit for use, while the figures seen from above have the appearance of being in relief. De Rossi seems to be of opinion that they were simply plates for domestic use, but as glass vessels were certainly used in the early centuries of the Christian era for eucharistic purposes, it seems quite possible that they were patens. In the *Liber Pontif.* we read that Pope Zephyrinus (203-221) ordered patens of glass to be carried before the celebrating priest.

One singular method of ornamentation, which does not come under either of the classes mentioned above, is exhibited in a drinking cup in the British Museum. A silver cup was made, the sides of which are pierced with numerous oval apertures, blue glass was then blown into the inside so as to protrude slightly through the openings, the effect is similar to that of a silver cup studded with sapphires.

Glass was also much used at Rome in the manufacture of artificial gems; and the story of the jeweller who cheated the Empress Salonina, wife of Gallienus, with some false gems shows to what perfection the art of imitation was brought. Imitations of emeralds, beryls, and other gems are frequently found.

Copies in glass of intaglios and cameos are also met with in great quantity; many hundreds may even now be purchased at Rome, and they are found wherever any considerable Roman town existed. As they were apparently made for those whose means did not enable them to purchase works in real stones, both were probably produced, not by engraving, but by pressure in a mould when the material was in a state of semifusion, in the manner formerly practised with so much success by Tassie; the cameos, however, were often finished with the wheel. The intaglios, doubtless, were chiefly intended to be set in rings, although some of them are too large for such a purpose. Notwithstanding, however, the great number of

specimens that have come down to us, there are but few of first-rate excellence as works of art; the latter, having evidently been cast from the finest gems of their time, have preserved to us designs of the greatest beauty with such conditions of unquestionable authenticity as render them of great value to the student of ancient art.

Mr. King (*Antique Gems*, p. 78), however, cautions us that of the pastes sold as antique in such abundance hardly one in a hundred is genuine, and that any paste (*i.e.*, glass intaglio or cameo) appearing never to have had a setting may be looked upon with the utmost suspicion. This is, perhaps, too sweeping, undoubtedly vast quantities are modern, but certainly many are antique, although no trace of the setting may remain.

Cameos of glass are sometimes met with of large size; a fine fragment in the British Museum in blue opaque paste, imitating lapis lazuli, has the upper half of a human figure, which, if perfect, would be about a foot high, and even larger examples have been noticed; No. 1068. '68, shown in Pl. VII., is a good though smaller example of these cameos made in moulds.¹ Besides human and animal figures, foliage and architectural ornaments are found on them, executed not unusually in glass of vividly contrasting colours, such as green and bright red; many of these no doubt served as ornaments for pieces of furniture, or for walls of rooms, (*see* No. 1072. '68, *et seq.* Cat. p. 19.)

Circular medallions, with a head of Medusa in cameo on each, and of nearly 2 in. in diameter, are not uncommon (*see* No. 276. '74, Cat. p. 21); it has been conjectured, with great probability, that these and other medallions of a like kind, were worn as *phaleræ*, or military decorations, by soldiers, or on the trappings of horses.²

¹ *See* Winkelmann, *Storia delle Arti*, ed. Fed., i., p. 40.

² *See* *Archæologia*, vol. xxxix., pl. xxiv., fig. 1. In Mus. Veronense, p. 121, is engraved a sepulchral stone,

on which is an effigy of a centurion, furnishing an excellent instance of the manner in which the *phaleræ* were worn.

Busts and figures in full relief were also made in glass, some in moulds, others were cut as if out of a hard stone, a good example of the last is a bust about $2\frac{1}{2}$ in. high in the British Museum, this is cut in "hæmatinum," opaque red glass, and is of very good style.

One peculiar method of employing glass in the manufacture of personal ornaments requires special mention: that, namely, in which the surface was hollowed in the form of a bird, a leaf, a lizard, or the like, and a very fine fillet of gold made to follow the outline and to mark out the features and members of the object represented; enamels of various colours were then inserted between the lines of gold, and the whole submitted to the action of the muffle furnace. These are sometimes executed with the most exquisite delicacy. The ground is almost always blue transparent glass, backed with opaque white to throw up the colour. In a few instances there is no enamel, but the whole of the incavo is filled with gold. The specimens in which enamel is used are peculiarly interesting, as furnishing early examples of that process of enamelling which we are accustomed to call *cloisonné*, and which was practised with so much success in Byzantium in the eleventh and twelfth centuries.

Many other small articles were made of glass, as spoons, children's toys in the form of animals and birds (v. No. 1078. '68, Cat. p. 17), dice, knuckle-bones, and counters.

Glass also played a very important part in the decoration of a sumptuous Roman house; thick pieces of coloured glass added to the brilliancy of the pavement, either in irregular fragments, or in larger slabs, so shaped as to form parts of a pattern.¹ Of the first method of using it a good example may be seen in one of the chambers of the house of the Faun at Pompeii, where many fragments of amethystine and of

² "Sectilia pavimenta." Suetonius, Lib. i., cap. 46.

opaque red glass of the most beautiful tint are embedded in the pavement, in conjunction with small pieces of variously coloured marbles fixed in a hard cement, in the manner now called in Italy "*alla Veneziana*." Of the second kind of pavement, called "*sectile*," an example formed almost entirely of slabs of glass is represented in Pl. I., Fig. 4, of Von Minutoli's work; the colours of the glass were white, green, and blue; it was found in the course of excavations made by the Duke de Blacas in the year 1820, not far from the portico of the temple of Venus at Rome, near the Coliseum. The room to which this pavement belonged appears to have formed part of a private house of earlier date than the temple which was built by Hadrian. Von Minutoli also mentions (p. 13) that at the *Isola Farnese*, nine miles from Rome, on the road to Viterbo, a pavement of slabs of green glass about the thickness of a tile was found. In the possession of the writer are some pieces of black, white, and orange opaque glass, which were found on the site of the palace of the Cæsars at Rome; they are about half an inch thick, and have been shaped so as to form parts of a pattern. The pieces used in pavements are not only of single colours but imitate porphyry, serpentine, and various granites. The walls of rooms were decorated in a like manner, and thousands of specimens of the pieces which made up such decorations may be found in the hands of the Roman dealers in antiquities. Examples, however, in which the original collocation of the pieces has been preserved or can be recovered are of the greatest rarity, all that have come under the notice of the writer are the three noticed below. These wall pieces are much thinner (*see* No. 896. '75, *et seq.* Cat. p. 19) than the pavement glass, they are often of very singular shapes, and it will be frequently seen that when placed together in pairs they form something like the petals of a flower. A few specimens, found at Pompeii or Herculaneum and preserved in the Museum at Naples, show the kind of patterns

which may be thus produced ; some are star-like, others rosettes, and each is placed in the centre of an octagonal piece of lavender-coloured opaque glass ; one of the stars is made of eight pieces of so-called mosaic glass, all cut from the same rod. As, however, these wall pieces were generally ground, so as to fit exactly, the Romans must have spent upon these decorations an amount which to us, accustomed to ornament our walls with paper or plaster, would appear surprising. Such decorations are, however, alluded to by ancient authors in terms denoting that they were considered as marks of great luxury ; as Vopiscus (*in vitâ Firmi*, cap. 3) tells us of Firmus, " His wealth was much spoken of, for he is " reported to have covered his house with squares of glass " attached by bitumen and other cements," (" De hujus divitiis " multa dicuntur, nam et vitreis quadraturis, bitumine aliisque " medicamentis insertis, domum induxisse perhibetur.") Seneca (Ep. 86) contrasts the vaults of the bath chambers of his own day covered with glass,¹ with the rude simplicity which marked the times of the Scipios. The earliest recorded instance of such decoration is that of the theatre constructed by M. Scaurus during his edileship in the first century B.C. Pliny (Hist. Nat. B. xxxvi. cap. 24) tells us that it was in three stories, the lowest of marble, the second of glass, and the third of gilt wood, and that it was capable of containing 80,000 spectators. The glass was doubtless not in solid masses but attached to the walls in thin plates or " crustæ." M. Deville has reproduced (Pl. XIII. and XIV.) from the Museo Passieri (vol. I, tav. lxxvi. and lxxviii.) a large relief, on which is Apollo between Melpomene and Thalia, and a frieze with masks, &c., the latter a Roman foot long and about four inches high, both in glass, these he thinks may have formed parts of such works as the theatre of Scaurus.

Nos. 896 to 896,5. '75. of the Catalogue, page 8, are in-

¹ " Vitro absconditur camera."

stances in which the pieces composing patterns have been found in such collocation as to admit of the restoration of the patterns, the pieces have been first chipped, and then ground and fitted together with the greatest exactness. They were found in the ruins of a villa near Rome, which is known to have belonged to Lucius Aurelius Verus (ob. 169), the son-in-law of the Emperor Marcus Aurelius.

Another variety of this system of decorating walls, in which higher artistic powers were called into use, was that in which not merely patterns, but subjects containing forms both of animals and men, were represented by means of coloured marbles and glass; very few examples of this description of work have come down to us; by far the most important formed part of the decorations of the hall of the Consul Junius Bassus, afterwards the church of S. Andrea in Catabarbara, in Rome, and now destroyed. Ciampini (Vet. Mon. vol. i., pl. 21-24) has represented the building and several portions of the decorations as they existed in his time; and Von Minutoli (pl. 4) has given a coloured engraving of a fragment, which is preserved in the Palazzo Albani at Rome. This is about 4 ft. 4 in. (Rhenish measure) high, by about 4 ft. wide; in the upper part the story of Hylas seized by the water nymphs is depicted, while the lower is occupied by a piece of drapery represented as if suspended to the wall. The upper part is chiefly composed of pieces of variously coloured marbles, some portions only being of blue and green glass; in the lower part glass is more freely used. The piece of drapery has a broad border on which are small figures of Egyptian deities and priests; these are entirely composed of glass, and that representing the garments is of the kind known as mosaic glass.

In tessellated work (*opus tessellatum*), or what we usually term mosaic, glass was more and more used as the desire for splendour increased; in early examples it is only found employed for the parts requiring very vivid colours, the rest being stone, marble, and baked clay; but in the fourth and

fifth centuries the mosaics which decorated the walls and roofs were wholly of glass.

Besides the ornamental vessels of coloured and moulded or cut glass which have been mentioned above, the Romans made a prodigious quantity of vessels of the most various forms and destined for every sort of domestic use from uncoloured glass; this has (with the exception of a very few examples, probably of late date) a slight green or yellowish tint, occasioned by the presence of small quantities of oxide of iron, from which sand is very rarely perfectly free. Horace therefore paid no extravagant compliment to the Bandusian fountain when he said that it was more bright than glass. Engravings of these may be found in numerous antiquarian works, and Mons. Deville (*Hist. de l'Art de la Verrerie*) has given many well chosen examples, with ingenious suggestions as to uses to which they applied. Sometimes these vessels were of large dimensions, globular urns a foot high, and of corresponding diameter, are not unfrequently met with.

Glazed pottery was not much in use, and as the finer specimens of ornamental glass took on the table of an opulent Roman the place which porcelain does upon ours, so common glass no doubt served for many purposes for which we employ common earthenware. Glass was used in Rome in the time of Martial (ob. A.D. 103.) in such quantities that the poor (Jews?), who inhabited the quarter of Rome beyond the Tiber, made a living by hawking about sulphur matches and exchanging them for broken glass.¹ Vessels of glass went even into the tomb, the

¹ . . . "Transiberinus ambulator
Qui pallentia sulfurata fractis
Permutat vitreis."

. . . Ep. Lib. i. 42.

In Juvenal (*Sat. V. v. 46*) is the following passage:—

Tu Beneventani sutoris nomen habentem

Siccabis calicem nasorum quatuor
ac jam

Quassatum rupto poscentem sulfura
vitro.

It has been inferred from this and Pliny's statement that glass fused with sulphur hardens into stone (vitrum sulphuri concoctum ferruminatur in

ashes of the dead were often placed in an urn of glass, and a great number of vases and cups and phials of the same material were placed around. The greater part of the entire vessels, which are preserved in our museums, have been found in sepulchres, twenty or thirty vessels of various sizes and forms being sometimes found in one tomb.

For one purpose the Romans used glass much less than we do, viz., the preservation of wine, for which use they employed large earthen amphoræ; but for very choice wine they sometimes used amphoræ of glass, for Petronius (*Satyricon*, cap. xxxiv.) narrates that at Trimalchio's feast amphoræ of glass were brought, carefully cemented, to the necks of which labels were affixed with this inscription, "*Opimian Falernian* an hundred years old."¹

The examples above referred to, as being of crystal-like glass free from a tinge of green, would seem to be of rather late date, and there is some ground for believing that such were made at or near Cologne. A small vase, figured by M. Deville (Pl. LXXA.), is said to have been found in a tomb near Rouen, probably of the third century. He states that it was perfectly like crystal, and that analysis shewed the presence of oxide of lead and a little tin, if the latter were present at all, it must have been in a very minute quantity as oxide of tin renders glass white and opaque. The vase in question, in fact, approached modern flint glass in composition.

There can be no doubt that glass was used by the Romans in windows, though by no means exclusively, mica, alabaster, and shells having been also used. Glass, in flat pieces, such as might be employed for windows, has been found in the ruins of Roman houses, both in England and Italy, and in the house of

lapidem, *Hist. Nat.*, Lib. xxxvi., cap. xxvi.), that the Romans mended glass by means of sulphur.

¹ Adlatæ sunt amphoræ vitreæ dili-

genter gypsatæ quarum in cervicibus pittacia erant adfixa cum eo titulo Falernum Opimianum annorum centum.

the Faun at Pompeii, a small pane in a bronze frame remains.¹ Glafs of this defcription feems to have been caft on a ftone, and is ufually very uneven and full of defects, fo that although capable of transmitting light, it muft have admitted of at beft an indifferent view of external objects. When the window openings were large, as was the cafe in bafilicas and other public buildings, and even in houfes, the pieces of glafs were, doubtlefs, fixed in pierced flabs of marble or in frames of wood. The pieces of glafs, or other transparent fubftance fo employed, were, we may infer, called *specula*. The ufe of glafs for this purpofe appears to have been familiar to Pliny, as he fays that *specula* were invented at Sidon. *Specularii* are mentioned in the Codex (Lib. x. tit. 64), in an ordinance of Conftantine II., A.D. 337. They probably were the glaziers of the time, working, however, in other materials as well as in glafs, *specular* bearing the meaning of window.²

In the Slade Collection, in the Britifh Mufeum, is a piece of glafs (No. 308 of the Slade Catalogue), bent by heat, which was given to the writer by Canon Von Wilmowfky, of the Cathedral of Treves; it was found with a large quantity of fimilar pieces under the walls of that church, accompanied and overlaid by fuch other remains as to make it tolerably certain that they were relics of the church, burnt in A.D. 420, when the city was pillaged by the Franks.

Whether the Romans ufed glafs for mirrors is a queftion which has been much debated; that they were aware that obfidian, and confequently black glafs or common glafs blackened on one fide, would reflect images, is certain (*vide* Pliny, *Hift. Nat.*, lib. xxxvi. c. 26), and it is equally fo that

¹ On the 5th May 1862 a memoir was read before the Academie des Sciences, in which an analyfis is given of plates of glafs found at Herculaneum,

they are faid to have meafured 70 cents. by 40 (about 16½ by 7½ inches).

² "In caldarium fuum latis specularibus diem admiferat." (Seneca, l. iii. Ep. 86.)

they had mirrors which would magnify (*sunt specula quæ in infinitum augeant*: Seneca, *Quest. Nat.*, lib. i. cap. cxvi.), and apparently some large enough to reflect the entire human person (*id.*, lib. i. cap. xvii.); but it is by no means clear of what substance these mirrors were composed. Their glass was so full of bubbles and striæ, and, so far as we know, their power of producing and polishing large surfaces of glass so limited, that on the whole it would appear more probable that their mirrors were metallic. A fragment of a circular plate of glass foliated with a sheet of lead is said to have been recently discovered at Lillebonne among Roman remains. The fact that mirrors could be made by the application of a coating of metal to glass was, as will be shown hereafter, known for centuries before such mirrors superseded those made of polished metal plates. To make a really good glass mirror two things are requisite, very pure glass, free from bubbles and striæ, and a good method of applying the metal; and it was apparently not until the middle of the sixteenth century that both these processes were perfected.

Undue stress has been laid on the passage in Pliny (*Nat. Hist.*, lib. xxxvi. c. 26), in which he says that the Sidonians first invented "*specula*," for the word may mean glass for windows, and not mirrors only, and whoever looks into all the passages in Pliny's *Natural History* in which mirrors are mentioned, must be convinced that not glass but metallic mirrors were those in ordinary use. In the passage, "*neque est speculis aptior ulla materia*," probably windows and not mirrors are alluded to. The whole question is well treated of in Beckman's *History of Inventions* (Art. Mirrors).

The Romans possessed some imperfect knowledge of the use of magnifying glasses. Seneca states (*Quæst. Nat.*, lib. i. cap. vi.) that a ball of glass filled with water enlarges minutely written letters. Perhaps lenses of glass were made, but if so it is difficult to account for Seneca's having mentioned the glass

ball and not the lens; if they were not made, the reason probably is that it was difficult to procure a perfectly pure piece of glass free from bubbles or striæ, defects which of course would be fatal to the efficiency of the lens.

A lens of glass or crystal is said to have been found at Niniveh, but it is altogether uncertain what was its date, as the mounds which mark the site of that city have been used as burying places for many centuries down to comparatively modern times. Another lens is said to have been found at Pompeii, but Mr. King (*Ancient Gems*, p. 110) doubts whether this was really anything but an imitation of a gem.

The passage in Pliny (*Nat. Hist.*, lib. xxxvii. cap. v.) in which he says that Nero looked at the combats of the gladiators in an emerald, has been interpreted as a proof that the use of a lens was known to the Romans, an emerald having been fashioned into one for the use of the Emperor; and as it would seem that he was short-sighted there seems to be much probability in the supposition; but it must be observed that the passage immediately follows one in which mirrors are spoken of, and the same effect is ascribed to a flat emerald as to a mirror.

Theophrastus (cap. 30) observes that mirrors were made out of carbuncles (anthracion) from Orchemenos in Arcadia, which shows that the idea of using precious stones as mirrors was not unfamiliar to the ancients.

The effect of a prism in dividing the solar ray was known to Seneca, for he says (*Quæst. Nat.*, lib. i. cap. vii.) that rods were made from glass drawn out, or with many angles like a club with branches; such, if the sun shine through them, give the colours of the rainbow.¹

Representations of the heavens and the starry bodies were

¹ "Virgula solet fieri vitrea stricta vel pluribus angulis in modum clavæ torosæ, hæc si ex traverso solem accipit colorem talem qualis in arcâ videri solet reddit."

made in Rome in^oglafs; for in the Acts of St. Sebastian (AA. S. S. xx. Januarii), which are believed to have been written by St. Ambrose (*ob.* 397), an astrologer is introduced, who says: "I have a chamber wholly of glafs, in which the whole fyſtem of the ſtars with the calculation of their movements is artificially conſtructed, in the making of which my father Tarquinius is known to have expended more than two hundred pounds of gold."¹

This is confirmed by Claudian's epigram "In ſphæram Archimedis,"² which, as tranſlated by A. Hawkins, runs thus:

When in a narrow glaſs Jove ſaw the ſkies,
He ſmiled, and thus to Gods expreſſed ſurpriſe:
" See how man's talents imitate our ways,
My heavenly work a fragile globe diſplays;
An aged Syracuſan, by his ſkill,
Arranges poles, laws, harmony at will,
To ſtars a ſecret ſpring gives motion true,
The parts with ſteadineſs their path purſue,
A zodiac framed by hand receives the ſun,
Which through the year proceeds his courſe to run,
And Cynthia feigned is ſeen each month to trace
The orbit o'er and ſhow again her face.
Audacious art, the world with pleaſure rolls,
The human mind celeftial orbs controls.
Why at Salmoneus thunder wonder feel?
All Nature's plan thoſe fingers can reveal."

¹ "Habeo inquit cubiculum holo-vitreum in quo omnis diſciplina ſtellarum ac mathēſis mechanica eſt arte conſtructa, in cujus fabrica pater meus Tarquinius amplius quam ducenta pondo auri dignoſcitur expendiſſe." (*cap.* xvi.)

² Jupiter in parvo cum cerneret æthera vitro
Riſit et ad ſuperos talia dicta dedit
Hucine mortalis progreſſa potentia curæ

Jam meus in fragili luditur orbe labor
Jura poli rerumque fidem legemque virorum
Ecc Syracuſius tranſtulit arte ſenex
Incluſis variis famulatur ſpiritus aſtris
Et vivum certis motibus urget opus.
Percurrit proprium mentitur ſignifer annum
Et ſimulata novo Cynthia menſe redit
Jamque ſuum volvens audax induſtria mundum

The curious story about malleable glass which has been told by Pliny (Nat. Hist. Lib. xxvii., cap. 26) and by Petronius Arbiter, should not perhaps be passed over without mention, whatever importance we may think proper to attach to it.

The story, as told by Trimalchio at his banquet¹ (Satyricon, Addison's translation) runs as follows, "There was once an
" artist made glass vessels of such a firmness that you would no
" more break them than gold or silver. This person having
" made a cup of the finest crystal, and such a one as he thought
" worthy none but Cæsar got admission with his present. The
" beauty of the gift, and the hand of the workman were highly
" commended, and the zeal of the donor kindly received.
" When the man, that he might change the admiration of the
" court into astonishment and ingratiate himself still more in
" the favour of the Emperor begged the cup out of Cæsar's
" hand and dashed it against the pavement with such vehemence
" that the most solid and constant metal could not escape
" unhurt. Cæsar was both surprized and troubled at the action;
" but the other snatching the cup from the ground, which was
" not broke but only a little bulged as if the substance of metal
" had assumed the likeness of glass, drew a hammer out of his
" bosom and very dexterously beat out the bruise, as if he had
" been hammering a brass kettle. And now the fellow was
" wrapt in the third Heaven, having as he imagined got the

Gaudet et humana fidera mente
regit.

Quid falso insontem tonitur Salmonea
miror?

Æmula naturæ parva reperta
manus.

¹ Titi Petronii, Satyricon, cap. 41.
Fuit tamen faber qui fecit fialam vi-
tream quæ non frangebatur, admissus
ergo Cæsarem est cum suo munere
deinde fecit reporrigere Cæsari et illam
in pavimento projecit, Cæsar non pote

validius quam expaverit at ille sus-
tulit fialam de terra conlisa erat tan-
quam vasum æneum. Deinde martio-
lum de sinu protulit et fialam otio belle
correxerat, hoc facto putabat se cælum
Jovis tenere. Utique postquam ille
dixit, Numquid alius scit hanc con-
dituram vitreorum? Vide modo. Post-
quam negavit, iussit illum Cæsar de-
collari, quia enim si scitum esset aurum
pro luto haberemus.

“ friendship of Cæsar, and the admiration of all the world ;
 “ but it happened quite contrary to his expectation ; for Cæsar
 “ asking him if any one knew how to make glaſs malleable
 “ beſides himſelf, and he anſwering in the negative, the Em-
 “ peror commanded his head to be ſtruck off ; for, ſaid he, if
 “ this art be once propagated, gold and ſilver will be of no
 “ more value than dirt.”

Pliny tells ſubſtantiſially the ſame ſtory, naming Tiberius as the Emperor who figured in it ; but ſays that the artiſt’s workſhop and tools were deſtroyed, not that he was put to death.

It is probable that theſe ſtories originated from an exaggerated report of a diſcovery of a proceſs by which the brittlenefs of glaſs was much diminifhed, as is the caſe by that of annealing in oil, already referred to, which has lately excited a good deal of attention.

We have very little poſitive knowledge of the ſtate of the art of glaſs-making at Rome, during the ages which witneſſed and followed the decline and fall of the Empire ; whatever veſſels may have been produced by the workſhops were no doubt made by the ſame proceſſes as thoſe of earlier times, and are probably ſcarcely diſtinguiſhable from them, except by imperfection of manufacture. One ſpecimen in the Slade collection (*Fig. 72* of the catalogue), which may belong to this period, deſerves notice ; it is a vaſe, the handles of which have been loſt. A ſimilar example in the Britiſh Muſeum, which has preſerved its handles, is of the ſame coarſe blue glaſs, and quite as clumſily made. It exhibits a form cloſely reſembling that of the cups which are frequently repreſented on the ſepulchral memorials of the Chriſtians of the earlier ages, and which there is every reaſon to believe were intended to repreſent the chalices uſed in the Communion. A ſmall golden chalice of this form was found ſome years ago at Gourdon, near Chalon ſur Saône, France, and larger examples once exiſted at Monza. Pope Zephirinus (A.D. 197—217) we are told ordered the uſe of

chalices of glass instead of those of wood (Platina historia de vitis Pontificum, in vita Zephirini).

A considerable quantity of glass was, however, manufactured for mosaics; of these decorations there is a series at Rome, ranging from the time of Constantine until after that of Charlemagne, chiefly or entirely composed of glass. Fine examples of the fifth and sixth centuries exist at Ravenna, and there would seem to be little ground for supposing that the material was imported and not made on the spot.

The making of glass for windows was, it would appear, continued throughout the dark and middle ages; its use for this purpose is alluded to by Lactantius¹ in the fourth century, St. Jerome² early in the fifth, and Gregory of Tours³ and Fortunatus⁴ in the sixth. Isidore⁵ writing circa 600, when mentioning glass, says, "neque est alia speculis aptior materia," but as he is merely repeating the words of Pliny, his testimony is perhaps not very important. The windows of these times were made of slabs of marble, or sometimes of hard stucco, in which were openings of various forms and of moderate size; in these the plates of glass were fixed; though many of these slabs remain at Rome, and in one instance, viz., at St. Prassede, portions of the talc with which the apertures were filled still adhere to their sides, no glass remains which can be attributed to a very early date. At St. Sophia, however, where the ancient method of glazing has been preserved, some of the plates of glass, 7 to 8 in. wide, and 9 to 10 in. high, which seem to have been not blown but cast, may perhaps date from the building of the church by Justinian.

The use of coloured glass in windows does not appear to be mentioned before the instance in the Lib. Pontif. where Leo III.

¹ De Opificio Dei, cap. 8.

² Comm. on Ezekiel, chap. xli. v. 16.
Apud Ducange, art. Vitreæ.

³ Hist. Franc., lib. vi. c. 10.

⁴ Carm. 1.

⁵ Origines, lib. xvi. cap. 15.

is said to have decorated the windows of St. Peter's and the Lateran with glass of diverse colours, but it is very probable that it was a very early practice.

GLASS IN BYZANTIUM AND THE EASTERN EMPIRE.

As the splendour and wealth of Rome declined many artificers no doubt emigrated to Byzantium, and whether the art was practised there in the time of Constantine or not, there is no doubt but that in later ages it was carried on there to a very great extent; one of the gates leading to the port took its name, as M. Labarte has pointed out, from the adjacent quarter in which the glass-houses were situated. Glass was also made at Thessalonica.¹ St. Sophia's, when built by Justinian, had its windows filled with glass, some of which, as has been said above, may perhaps even now remain; and glass was largely used for works in mosaic, and probably made, or at least remelted and coloured, on the spot; for at the commencement of the eighth century, when peace was made between the Caliph Walid and the Emperor Justinian II., the former stipulated for a quantity of mosaic for the decoration of the new mosque at Damascus. In the middle of the tenth century, the Emperor Romanus II. sent to the Caliph Abderrahman III. the materials for the mosaics of the Kibla in the mosque at Cordova.²

We, however, know scarcely anything of the products of the Byzantine workshops as regards vessels or ornamental works in glass; but it is not improbable that some of the cups or vases, which bear the character of classical art in its decline, such as the cup with bacchanalian subjects belonging to Baron Lionel de Rothschild, the *situlae* in the treasury of St. Mark at Venice, and two specimens in the Slade Collection in the

¹ Johannes Cameniata de Excidio Thessalonicensi, Narratio, x., p. 501.

² Kugler's Handbook of Painting, vol. i. p. 58, note.

British Museum (Nos. 320 and 321 of the catalogue), may have been made at Constantinople; for we may reasonably suppose that this branch of art underwent somewhat the same vicissitudes which befell the arts of painting and sculpture in the Eastern Empire. The Byzantine painters and sculptors seem to have followed classical models with more or less bad taste and feebleness, until the fervour of the iconoclastic Emperors brought about a temporary paralysis of all art and the emigration of many of its practitioners. When in the middle of the ninth century the arts were again more largely practised, ancient traditions had in a great measure been lost, and the new style which we know as Byzantine, into which the older had previously been in some degree merging, became almost exclusively prevalent. Something of the same kind probably happened as regards the manufacture of glass, but examples which we can confidently assign to the post-iconoclastic period are almost wholly wanting.¹ Almost the only objects which have come under the notice of the writer, and which there is good ground for supposing to belong to the centuries intervening between A.D. 800 and A.D. 1200, are some in the treasury of St. Mark's at Venice, which, as they differ much in character from any other kind of glass productions, and in some cases bear Greek inscriptions on their mountings, are probably specimens of Byzantine work. They are supposed, together with many other objects in the same treasury, to have been part of the plunder of Constantinople, when it was taken by the Crusaders in A.D. 1204. Five of these are cups and two are shallow basins; the glass in all is greenish, very thick and with many small bubbles; all have been cut with the wheel. One of the cups, 12 inches wide and 6 high, is of a somewhat elegant form; it has two handles, but is otherwise without ornament.

¹ The "vasque" in the Hôtel de Cluny described by Labarte, vol. iv. p. 545, is probably of Arab origin.

Another cup has the surface so cut away that small cones are left standing up, and another has circles formed in the same manner; a third has a very rude figure of a leopard couchant, with outlines and spots left standing up in the like fashion.

The basins are shallow, about 11 inches wide; one has a setting of gems in silver gilt, and a long handle; the other has circles and cones in projecting lines on its under side, and a setting in silver gilt with the inscription \div ΑΓΙΕ ΠΑΝΤΕΛΕΗΜΟΝ ΒΟΗΘΕΙ ΤΩ ΚΩ ΔΟΥΛΩ ΖΑΧΑΡΙΑ ΑΡΧΕΠΙΣΚΩΠΩ ΙΒΗΡΩ ΑΜΗΝ, *i.e.*, "Saint Panteleon, protect thy servant Zacharias, Archbishop of Iberia, Amen." The most remarkable, however, among these glass vessels is a small vase $3\frac{1}{2}$ inches high by 4 wide, of very dark brown glass almost opaque; the body is somewhat globular, and the mouth widens upwards. The body is decorated with seven circles enclosing figures which are painted on the surface in a pale flesh-coloured enamel with ornaments in gold and in red. These figures are evidently free copies of antique originals, and are closely allied in point of style to the ivory boxes of Byzantine origin with mythological subjects which may be seen in various collections and church treasuries. Some of the figures are clothed and some nude; one seems to represent Jupiter seated on a throne, and addressed by a figure with wings, probably intended to represent Mercury; another figure holds a trident. The circles are composed of rosettes of blue, green, and red enamel, each surrounded by lines of gold. Above and below the points of junction of the circles are smaller circles of gold enclosing busts of men, with bands of gold in the hair. On the outer side of the mouth are rosettes in groups of four, with scroll-like flourishes in gold between the groups. An inscription in Cufic characters runs round the inside of the mouth, and another round the lower part of the body below the figures. No reading of these inscriptions has as yet been obtained, and it seems probable that they are merely ornamental and without

as one in the Bibliothèque Impériale,¹ at Paris, which has the bust of a man with the legend ΕΠΙ ΘΕΟΔΩΡΟΥ ΕΠΙΛΡ
 "under the Eparch Theodore." Other examples are in the British Museum.

The famous Sacro Catino at Genoa, a shallow dish with a foot and handles, long supposed to have been formed out of a single emerald, is more probably of Byzantine than of antique origin. It is hexagonal, rather clumsily formed, with some flight ornament, and has apparently been finished with a tool. The colour is very fine, but it contains many small bubbles. It was part of the booty obtained at the taking of Cæsarea in 1101.

The cup at Monza, said to be hollowed out of a sapphire, is perhaps also glass, the writer, however, failed to detect any bubble on a very close inspection, and it is very cold to the touch. It is of a very beautiful blue, and about three inches in diameter. It is said to have belonged to Queen Theodolinda (circa A.D. 600). M. Labarte² quotes Constantine Porphyrogenitus (De Cær. Aulæ Byz., p. 661) as enumerating vases of glass among the objects sent by the Emperor Romanus Lecapenus to Hugh, King of Italy, in 926.

At this period it seems to have been commonly in use, for Liutprand (Relat. de Legat. Const., cap. 63) tells us that the Greek bishops drank from glasses³ of small dimension. His embassy was in A.D. 968.

It is difficult to find any mention of Byzantine glass-working during the later middle ages, but Clavijo, in the narrative of his embassy to Timour Beg in 1403-1406, states that in the church of St. John Baptist at Constantinople were many lamps of glass.

¹ Catalogue des Camées, etc., de la Bibliothèque Impériale, par M. Chabouillet, p. 610.

² Hist. des Arts Indus., t. iv. p. 539.

³ "Soli mensæ assidunt nudæ paximatiæ sibi apponentes balneaque (wine and water?) tunc vitro parmodico non bibentes sed forbillantes."

GLASS OF THAT PART OF THE EAST NOT SUBJECT TO THE
GREEK EMPERORS.

As to the manufacture of glass in that part of the East which was not included in the Byzantine Empire, or which early fell under the dominion of the successors of Mahomet, our information is but scanty. A most remarkable illustration of Persian work may be found in the cup of Chosroes I. (A.D. 531-579), preserved in the Bibliothèque Nationale at Paris. It is a very shallow bowl of gold, in which are set a central medallion of rock crystal sculptured with an effigy of the king, and three rows of medallions, white and crimson alternately, ornamented with rosettes in relief; of these the white are of crystal and the crimson of glass. Between these medallions are lozenges of green glass. Both medallions and lozenges are transparent and set clear. The rosettes on the crimson medallions have been formed by casting or pressing the glass into moulds.

Little can be said from existing specimens respecting the manufacture of glass in the East from this period until the thirteenth century, but that glass was made in several countries under the Arab rule, is proved by the coins, or weights,¹ or tokens of glass which are occasionally found, and which are usually inscribed with the names of Fatimite Caliphs of Egypt in Cufic characters; one of these, brought from Upper Egypt, was inscribed, "by order of Obeyd Allah, son of Alkhebkhab, this has the value of a feston or twenty kharouba of weight." (*Encyc. du 19 Siècle*, art. Verre). Another in the Bibliothèque Nationale, at Paris bears the name of Al-Mo'izz, who reigned in Egypt from A.D. 952 to A.D. 975.

¹ There has been some difference of opinion as to the use for which these objects were made; a passage quoted by Prof. M. I. de Goeze from El Mokaddefi (v. Academy 26 Feb. 1876) states distinctly that their use was as test weights for coins, but they appear in general to be rather carelessly made, not with the accuracy which weights for coins should have.

Another, published by Affemani (Museo Cufico Naniano, Part 2, p. 121, Pl. VIII.) has on the one side the name of the Caliph Al-Aziz-Billah (975-996), and on the other, four lions with human heads. Three examples in this collection, Nos. 474. '75, 475. '75, and 476. '75, bear the names of a certain Omar, the Fatimite Caliph El Mostanser Billah, A.D. 1035 to 1094, and El Hakim, A.D. 996 to 1020.

Glass was, however, well known in the East, even in Arabia, in the seventh century, for in the Koran (Sura XXVII.) may be found the legend how Solomon deceived the Queen of Sheba by paving part of his hall with glass.

The *Ortus Sanitatis* (de Lapidibus, cap. cxxxix.) quotes Aben Mefuay (who is probably the same person as Abu Maher Moussa Ben Jaffer, a celebrated physician, who appears to have written in Persia, circa A.D. 900), as speaking of glass as being white, red, yellow, and blue, and it is also mentioned by Avicenna circa A.D. 1000.

The art of glass-making, although not wholly unknown, would, however, seem to have been but little practised in the parts of the East subject to the Mahomedan rule until after the year 1000; for (as has been said above, p. lv) at the commencement of the eighth century, when peace was made between the Caliph Walid and the Emperor Justinian II., the former stipulated for a quantity of mosaic for the decoration of the new mosque at Damascus. In the middle of the tenth century, the Emperor Romanus II. sent to the Caliph Abderrahman III. the materials for the mosaics of the Kibla in the mosque at Cordova.¹

In the eleventh century it apparently was carried on in Egypt with much success, for in the life of St. Odilo, Abbot of Fulda (ob. 1049), a story is told about a "vas pretiosissimum" "vitreum Alexandrini generis," which was placed on the table

¹ Kugler's *Handbook of Painting*, vol. i. p. 58, note.

of the Emperor Henry, and having been broken by a fall, was mended by the faint. (*Vita S. Odilonis*, lib. ii. cap. xii. ; *AA. SS. Ord. Ben.*, sæc. xvi. pt. I.)

A curious passage in the *Safarnamah* of Nafir Ibn Khufri (published by the Royal Asiatic Society), who visited Jerusalem about 1060, shows that glass-making in Syria was at that time more advanced than might perhaps have been expected. He states that in the church in that city called *Beytu-l-makamah*, "Portraits of Jesus represented as sitting on an ass, are put up in several places as well as those of the other prophets, such as Abraham, Ishmael, Isaac, Jacob, and his children (on all of whom be peace) and they are anointed with oil of sardus. Each picture, moreover, is covered with a large plate of transparent glass of the same size as itself, so that the picture may not be at all hidden, and this they place there to prevent the dust from settling on the painting, the glasses being daily cleaned by servants."

Matthew Paris (*Hist. Maj.*) tells us that on the 3rd June 1191, Richard I. encountered a great galley off the coast of Syria carrying reinforcements to the Saracens, then besieging Acre, and that the Saracens threw Greek fire in vases, which in some MSS. are said to have been "vitrea."

In the twelfth century we find from the travels of Benjamin of Tudela (circa 1163) that the making of glass was practised by the Jews at Antioch, where were ten glass manufacturers of that nation, and at New Sur, where were four hundred Jews, "shipowners and manufacturers of the celebrated Tyrian glass."¹ He also tells us that it was said that one wall of the great mosque at Damascus was formed of glass by the Magi, and that there were in it "as many openings as there are

¹ The Rev. H. B. Tristram (*Land of Israel*, p. 52) states that at Tyre, in the course of excavations, numberless fragments of glass, shapeless but variously coloured, were found, "and by their solidity suggested the idea that they were the rejectamenta of the ancient glassworks."

“ days in the solar year, and that the sun in gradual succession
“ throws its light into the openings, which are divided into
“ twelve degrees.” He also states that the Shah¹ of Persia,
Sinjar (1140-1157), had caused the body of the Prophet
Daniel to be placed in a coffin of glass at Susa. We have,
unfortunately, no description of the kind of glass then made
in Syria, nor have any examples been observed which can be
assigned with certainty to the twelfth or any earlier century. In
the treasury of St. Mark’s at Venice, there is, however, a
remarkable vessel of glass, which is of oriental fabrication, and
probably of early date. It is $8\frac{1}{2}$ in. wide by 4 in. deep, of a
turquoise green paste, nearly opaque. On the bottom are four
Arabic characters signifying, according to Montfaucon,²
“ God the Maker.” The bowl is five-sided, and on each side
is a rude figure of a hare. These figures, as well as the inscription,
are in low relief, and were probably cut with the wheel.
The setting is of filigree with stones and ornaments of cloisonné
enamels. There is a tradition that it was a present from a
king of Persia, in 1470, but the setting is of a much earlier
character, and not Persian in style.

There are, however, examples dating probably from the
thirteenth century, and particularly a basin and a large bottle
belonging to Baron Lionel de Rothschild; round the latter of
these is an Arabic inscription, containing the name of El-Melek
El-Ashraf, a name borne by several Sultans of Egypt and
Syria in the thirteenth century. M. Labarte (*Hist. des Arts
Industriels*) mentions a shallow basin in the Musée de Cluny,
as bearing the titles of Malek Adhel, who reigned in Egypt
from A.D. 1279 to A.D. 1294.

There is little difference in character between this and
examples belonging to the next century made in Egypt. All
show that the makers were tolerably expert glass-blowers, and

¹ More properly the Seljuk Sultan.

² *Diarium Italicum*.

could produce vessels of considerable size; but the glass is of bad colour and full of bubbles and imperfections. The makers had learnt, probably from the Byzantines, the art of gilding and enamelling glass, and made much use of it. Inscriptions in large characters are favourite ornaments; figures of birds, animals, sphinxes, and other monsters, are found. The outlines are generally put on in red enamel, the spaces between being often gilt. The enamels are used sometimes as grounds and sometimes for the ornaments; the usual colours are blue, green, yellow, red, pale red, and white.

Among the products of the Oriental glass-works may be particularly noticed the enamelled lamps which were suspended in the mosques, especially in the fourteenth century.¹ Lamps of this kind are still to be found in the mosque of Sultan Hassan (1347-61) at Cairo. One with the name of that sultan is in Mr. Magniac's collection. A specimen, bearing the name of the Emir Sheikho, who built a mosque at Cairo in 1355, is in the Slade collection (No. 333, Plate VIII.).

Three very good specimens of lamps, doubtless of Egyptian manufacture, are in this collection, all dating from the fourteenth century. They possess additional interest, as they bear the names of the persons who either made or decorated them, as will be seen in the catalogue. The artist in two examples designates himself as "*rashim*," a word which, like many other Arabic words, is capable of many interpretations, the primary sense, it would appear (see Mr. Poole's observations in the catalogue), is one who marks; here it probably is to be understood, one who paints or writes. That the name of the decorator rather than that of the glass-maker or blower should be thus commemorated is very easily to be understood, no particular skill was required to produce the vessel, for as is the case with other similar Oriental objects neither the material

¹ See Catalogue of Works of Art on Loan, 1862, Nos. 4,965-8.

nor the workmanship is good, the merit is wholly in the decoration. Two of the three examples (Nos. 1056. '69. and 581. '75.) would appear to date from the earlier, and one (No. 6820. '60.) from the latter half of the fourteenth century.

In the Slade collection in the British Museum, besides the lamp above noticed, may be remarked a bottle of peculiar and elegant form, diapered over with birds (No. 334, Pl. IX.), and a covered bowl of ancient though less rich workmanship (No. 335) probably of Egyptian origin.

Such enamelled vessels were brought into western Europe, and evidently much esteemed, for we find them mentioned in the Royal Inventories of France. In 1380 Charles V. had "trois pots de voirre rouge à la façon de Damas. Ung petit voirre ouvré par dehors à images à la façon de Damas. Un bacin plat de voirre peint à façon de Damas, et une bordure d'argent esmaillée de France et de Bourgogne. Une lampe de voirre ouvree en façon de Damas sans aucune garnison." In 1399, "Une coupe de voirre peint à la Morisque."¹ Our Henry III. had a glass cup which was presented to him by Guy de Rouffillon, and caused it to be set with a handle and foot of silver.² This may very probably have been a glass of Eastern origin. Henry IV. had a little vessel or pot for "theriacum" of silver gilt with a glass of Alexandria.³

We may see from the above, and many like cases, that Damascus was supposed in the West to be a chief seat of this manufacture, and an additional proof that it was really so is supplied by what we are told by Clavijo, in the narrative of his embassy to the court of Timour Beg, A.D. 1403-1406, viz.,

¹ Laborde, Notice des Emaux du Louvre, Glossaire, sub voce Voirre. "oveſqu'un glas d'Alifandre." Kal. of the Treasury of the Exchequer,

² Rot. Claus. 29 Hen. III. m. 18. first year of Henry IV.

³ "Petit triacler d'arg ennouez

that in 1402 that conqueror carried off from Damascus to Samarcand¹ "weavers of silk, men who made bows, glass, and " earthenware, so that of these articles Samarcand produces the " best in the world." The same writer says (p. 134) that at Timour's banquets, in the camp at Samarcand, meat was served " in basins of gold, silver, earthenware, glass, and " porcelain."²

A few examples of this manufacture, which have been preserved in the West from an early date, deserve mention; one of these is the cup in the museum of the University of Breslau, which is said to have belonged to St. Elizabeth of Hungary, who died in 1231. This is a drinking cup without a foot, of moderate size, and its only ornaments are lines of red enamel forming arabesque patterns. Another is the so-called "Verre de Charlemagne," formerly in the Abbey of Chateaudun, now in the Museum of Chartres; it has Arabic inscriptions.³ The "Luck of Edenhall," an elegantly enamelled cup, somewhat oriental in pattern, but without inscriptions, is probably of a like origin. It is preserved in the family of Musgrave of Edenhall, and is enclosed in a stamped leather case of the fifteenth century.⁴ Another specimen, also with a case of the fifteenth century, is preserved in the Museum at Douai. Two good examples are at Vienna in the Treasury of the Cathedral, where they have been since the fourteenth century.

The sack of Damascus by Timour Beg's army and the carrying away of the workers in glass, no doubt injuriously affected glass-making in that city, and the superiority of the

¹ This is confirmed by Cherefeddin, the historian of Timour Beg, who says (book v. chap. 26.), that the artisans were divided among the Emirs, to be immediately conveyed to Samarcand.

² Edition published by the Hakluyt Society, p. 141.

³ Engraved in the *Revue Archéologique*, tom. xiv. pl. 308.

⁴ Engraved in Lysons' *Cumberland*, p. ccix.

Venetian manufacture, then fast rising to the excellence to which it eventually attained, probably assisted in bringing about the decay of the art. We hear little from travellers in the East from henceforth about the making of glass, nor do our collections seem to contain examples of Eastern manufacture of the fifteenth or sixteenth centuries. An exception, perhaps, is a bottle with a long neck, on which are inscriptions in gold on a blue ground, and figures of dancing girls enamelled in various colours. This is, perhaps, Persian, and is certainly later than the fourteenth century; it was a few years since in possession of the Princess Eleonora Corsini, at Florence. A very elegant vase is in possession of the Marchese Alfieri, at Turin; this is of blue glass, about 1 ft. high, enamelled with inscriptions, birds, and other ornaments; it is in a beautiful silver mounting of the fifteenth century, with German inscriptions, and may perhaps be not much earlier in date than its mounting.

Pliny tells us that the Indian glass was the finest, being made from crystal, but no examples seem as yet to have been carefully examined which have been well ascertained to be of Indian origin. In the tope at Manikyala, in the Punjab, opened by General Cunningham (Fergusson's Hist. of Arch.), which appears to date from about the Christian era, was found a glass stoppered vessel, and vessels or fragments of such have been discovered in other topes of a later date. The fragments of glass in the British Museum, found at Brahminabad, are hardly distinguishable in character from Roman glass. Dr. Birdwood, of the Indian Museum, has suggested that the Indian glass which Pliny mentions was really Chinese. In the time of Pliny no doubt articles of Chinese origin might, and probably at Rome would be, called Indian, and this supposition is strengthened by the fact mentioned hereafter (p. cl), that the Chinese would seem to use quartz rock at the present day in the making of glass in the province of Shan-tung. The Indian enamellers now use cakes of glass or enamel imported from China, and

as yet India has yielded few traces of the manufacture of glaſs within its borders.

Sir John Hawkins (in Purchas's Pilgrimes) indeed ſays in his deſcription of the treaſures of the Emperor Jehangire in 1608, that "of rich glaſſes there be two hundred," but he gives us no hint as to their character, they may have been Perſian, or Chineſe, or even Venetian. The latter were frequently carried by the navigators of the ſixteenth century in their voyages to the Eaſt. Pigafetta, for inſtance, in his account of the voyage which he made with Magellan, mentions that the King of Borneo was preſented with a "gilded drinking cup and another vaſe of glaſs with a cover."¹

Bracelets of glaſs were commonly worn in the ſame century by the women of India (*v.* Purchas's Pilgrimes, vol. ii. lib. 10, chap. viii. ; Voyage of John Huighen van Linſchoten); and Gaſpero Balbi, in 1582, ſays of them, "For the voyage of Saint Thomas to Pegu it is good to carry bracelets which they make of glaſs in Saint Thomas, for with theſe better than with money you may buy victuals, and there in the city where you buy them they are ſold at a lowe price, but if they are enamelled they ſell them deare." (Purchas, vol. ii. lib. 10, chap. v.)

In the ſeventeenth century we again meet with a peculiar and characteriſtic kind of glaſs in Perſia, blue with gold ornaments, of which No. 343 (Pl. XI.) in the catalogue of the Slade collection is an example. Chardin, who was in Perſia between 1664 and 1677, tells us that the windows of the tomb of Shah Abbas II. (ob. 1666), at Kom, were "de criſtal peint d'or et d'azur," and theſe vaſes may therefore very probably be of that period. He deſcribes bottles as ſome cut diamond-wife, others "à gaudrons," and others as painted; it would appear

¹ "Un bicchier dorato e un' altro vaſo col ſuo coperchio."

from the context that the bottles he was describing were of Venetian origin, but he does not make his meaning quite clear.

Mirrors and "belles bouteilles à prendre du tabac," probably the water holders of narghilehs, were, he tells us, brought from Venice.

Chardin says that the ordinary glaſs made at that time in Perſia, was of bad colour and very imperfect manufacture (vol. iv. p. 257), this he attributes to the badneſs of the fuel which the makers employed, and to the fire not being maintained more than three or four days; the beſt glaſs, he ſays, was made at Shiraz. The manufacture had exiſted, he ſays for only about eighty years, having been introduced by a neceſſitous Italian; from that time to the preſent glaſs has, it would appear, been made in Perſia in the ſame forms, and of the ſame quality, ſeveral ſpecimens (as Nos. 2423 to 2431.—'76) of veſſels have been lately added to this collection which are ſtated on good authority to be exactly ſimilar to thoſe made daily in Perſia; ſome of theſe (e.g. 2431.—'76) correſpond in form to a bottle ſhown in Chardin's engraving of the interior of the Shah's drinking hall at Iſpahan, while in texture and quality of material they differ little from Venetian glaſs of the ſixteenth or ſeventeenth centuries.

Glaſs was alſo manufactured in this century at Smyrna; for Grelot ("Relation d'un Voyage à Conſtantinople," Engliſh edit., p. 35) mentions glaſs-making among the trades practiſed in that city; he travelled about 1680.

GLASS IN ITALY.

But little has as yet been aſcertained reſpecting the making of glaſs in Italy during the dark and earlier middle ages, the hiſtory of even the Venetian manufacture does not begin at a very early date. As, however, during the fifth and ſixth

centuries, many and large churches were built at Rome, and at Ravenna, which were filled with immense windows, and largely adorned with mosaics; it seems probable, that glass was made, or at least coloured, in both cities. In Rome mosaic was largely used down to the ninth century.

In the eleventh century we find that Desiderius, Abbot of Monte Cassino (afterwards Pope under the name of Victor III.), sent to Constantinople for workers in mosaic;¹ and this fact, coupled with the absence of mosaics of that period at Rome and elsewhere in Italy, excepting Venice, seems to indicate that the manufacture was at that period little practised in that country. In the twelfth and thirteenth centuries mosaic work was much used in Central Italy, in the decoration of monuments, tabernacles, and the like, where it was inlaid in white marble. In Rome, where the family of the Cosmati have left many monuments of their skill, it is not uncommon to find such a decoration composed partly of pieces of antique glass, and partly of the manufacture of the time. As the knowledge of the art of making coloured glass was pretty widely spread, it is scarcely likely that all the glass was brought from Constantinople, or even from Venice.

That a knowledge of the art of making both plain and coloured glass was pretty widely diffused throughout Europe, from a period at least as early as the twelfth century, is shown by the treatises of Ercilius and Theophilus, where we find directions for making glass vessels as well as window glass, and receipts for the production of several varieties of coloured glass. The first of these writers may, without improbability, be supposed to have been an Italian, who lived at some period anterior to the twelfth century; but the work, as we now have it, seems to have been added to by an inhabitant of the northern part of France, in or before the thirteenth century. Theophilus would appear to have written in Germany, and not earlier than the

¹ Leo Ostiensis, lib. iii. cap. 28.

twelfth century.¹ In these treatises a distinction is made between ordinary and Roman glass, and in one passage of Eraclius (book iii. cap 49) Jewish glass, "*Plumbum vitrum Judæum scilicet*," is mentioned. By Roman it appears clearly that ancient Roman, not Byzantine, is meant, and it is directed that it should be employed for glazing earthen vessels, and for making artificial gems. Jewish glass is to be employed for painting on glass, and was suited to the purpose as containing lead, and therefore being more fusible. In the seventh chapter of the third Book of Eraclius, are full details as to the making of glass, in which process two parts of fern ashes and one of the ashes of brush-wood are directed to be employed.

Eraclius describes the method of ornamenting vessels with gold in the same manner as those found in the catacombs at Rome, but he speaks of it, not as an art then practised or having come down by tradition, but as being re-discovered by himself. Theophilus, on the other hand, describes various processes of this ornamentation as being actually practised by the Greeks in his day. In each of these works directions for making both window glass and vessels are given; but the latter branch of the art was apparently not practised in Europe during the middle ages with any considerable success, excepting, as we shall see, in Venice.

Vessels of glass of European fabrication, although doubtless made and used for certain purposes, especially perhaps for medical uses,² do not seem to have been in general use, nor were they so decorated as to make them objects of luxury, and accordingly they are rarely noticed in inventories.

¹ See Mrs. Merrifield's *Ancient Practice of Painting*, vol. i. p. 166.

² In the curious satirical poem by Nigel Wreker, Brunellus, or as Chaucer calls it, "the tale of Dan Burnel the 'Assie,'" the hero buys at Salerno, from one Trufator, a merchant from London, ten "*vitrea vasa*" to contain

drugs. This writer is believed to have lived about the end of the twelfth century. In the wardrobe account (*Liber quotidianus Contrarotulatoris Garderobæ*) of the twenty-eighth year of Edward I., *i.e.*, 1300, p. 57, mention is made of the purchase for the King's use of "*duo urinalia vitrea*."

If glass for windows was made in other parts of Italy the other chief branches of glass manufacture, viz., of mosaic, of vessels, and of personal ornaments, were still more extensively practised at Venice. It has been asked, What was the origin of this manufacture? The native writers have been disposed to think that it was brought to the lagunes by the refugees from the mainland in the fifth century; and others, that it was chiefly or entirely learnt from the Greeks of Byzantium at a much later date. Both monumental and documentary evidence are almost entirely wanting as regards the period antecedent to the thirteenth century; with the exception (as regards monuments) of the mosaics in the churches of Murano, Torcello, and St. Mark, the earliest of which are those of the church of St. Cyprian at Murano, completed in A.D. 882. We have no evidence, however, whether these were the work of native or of Byzantine artists, but the fact that Desiderius, Abbot of Monte Cassino in the eleventh century, sent, not to Venice, but to Constantinople, for workers in mosaic, indicates that the reputation of Venice in that branch of art, was at that time not great.

The argument in favour of the early existence of the art of glass-making at Venice, and its traditional derivation from Roman workmen deduced from the similarity of processes and colour between the Venetian work of the sixteenth century, and that of the first and following centuries at Rome, loses much of its apparent force, when it is remembered that the earliest products of the Venetian glass houses with which we are acquainted bear a different character, and that the processes in question, such as those of making mille fiori and vitro di trina, (so far as we know) first came into operation at the time when all relics of ancient art were carefully collected, and reverently studied and copied.

Signor Cecchetti remarks (*Monografia dell' arte Vetraria*, Venice, 1874, p. 7), that in the documents of the eleventh and twelfth centuries, preserved in the Venetian Archives, no men-

tion occurs of glafs or of glafs-workers, with one exception, that of Petrus Flavianus or Flabanicus (hereafter mentioned), and he evidently holds the opinion that it was not until the thirteenth century that the art was practifed on a large fcale; he, however, does not affert that it was altogether loft during the earlier centuries of the exiftence of Venice, nor does it appear probable that fuch fhould have been the cafe; when is remembered that (as will be fhown hereafter) it feems certain that in France, Germany, Spain, and (poffibly) even in England fome knowledge of the art was preferved through the dark ages, it muft appear improbable that it fhould have perifhed in that archipelago, where the barbarian invaders of the Roman empire never eftablifhed their rule, and where confequently the traditions of ancient civilization muft have been better preferved than in almoft any other place. The making of glafs was not carried on as now, in large eftablifhments, but by artifans working on a fmall fcale, and it is hardly likely that among the refugees from cities fo large as Padua, Aquileia, and others, were none able to produce articles of fuch conftant ufe in everyday life as were thofe formed of glafs in the later days of Roman civilization.

Commerce was actively carried on by the inhabitants of the iflands of the lagune, the “innumera navigia,” of which Caffiodorus writes in his letter to the Tribunes of Venice (A.D. 523), were probably not all mere boats, but fome of them fea-going veffels, and where trade is active there is always a probability that manufactures will flourifh.

It is, however, highly probable that the vaft undertaking of covering the interior of St. Mark’s with mofaic had a moft important effect upon the manufacture of glafs in Venice; for if the manufacture already exifted, it would unqueftionably have received a great impulfe therefrom; if it did not exift, the prefence of Byzantine artifts and workmen skilled in fuch matters would lead in the moft natural manner to the

discovery that the lagunes, possessing both abundance of fine sand and of maritime plants yielding alkali, were well fitted for the feat of a manufactory of glafs.¹

The names of the earliest artists in mosaic who worked at St. Mark's have not been preserved, but in the year 1159 one Pietro was so employed (Lazari, *Notizia delle Opere d'Arte della Raccolta Correr di Venezia*, 1859, p. 90). Depping (*Hist. du Commerce*, vol. i. p. 191) is quoted by Mrs. Merrifield (*Anc. Practice of Painting*, vol. i. p. xc.) as asserting that the manufacture of crystal glass and of coloured glass was carried on at Venice as early as the beginning of the twelfth century.

The earliest positive evidence of the existence at Venice of a worker in glass would, however, seem to be the mention in the year 1090 of Petrus Flavianus, *phiolarius*, in the Ducale of Vitale Falier in the Archivio Generale at Venice (*Monografia della Vetraria Veneziana e Muranese*, p. 259).

It has been conjectured with some plausibility that the taking of Constantinople, in 1204, may have afforded the Venetians the opportunity of acquiring additional knowledge of the processes employed by the Greek glass-makers.

In 1224 twenty-nine persons are mentioned as "*friolari*" (*i.e.*, *phiolari*), who had infringed the regulations laid down by the officials of the "*ars friolaria*" (*Liber plegiorum Comunis*, May 1224, quoted in *Monografia della Vetraria*). This seems

¹ In later times, however, a great part of the materials of glass were obtained from other sources. Sand is said to have been brought from the mouth of the river Belus, on the coast of Syria (see *Art Treasures*, sect. Vitreous Art, by A. W. Franks), and Sandys, who travelled in 1610, says that, "in the desert between Alexandria and Cairo is a weed called Kali by the Arabs, which they use for fuel and sell the ashes, crushed together like a stone,

" in great quantity to the Venetians, who equally mixing the same with the stones brought from Pavia by the Ticino, make thereof their crystalline glass" (p. 90.) Much information as to the materials used by the Venetian glass-makers will be found in Neri, *L'Arte Vetraria*, first published at Florence in 1612. Neri calls the quartz "*tarso*" and the alkali from the Levant "*rochetta*."

to prove that at that period the art had become one of considerable magnitude.

Distinct documentary evidence on the organization of the glass manufacture of Venice begins in the thirteenth century, and the earliest portions of the "*mariegole*," (*i.e.*, *madre-regole*) or codes of trade regulations of the various sections of glass-workers would appear to have been drawn up during that century or towards its close, one regulation in the *Mariegola dei phiolieri de Muran* is, however, said by the Abate Zanetti (*Guida di Murano*, p. 219) to bear as early a date as 1180. Several of these "*mariegole*" are still preserved in the libraries or archives of Venice and Murano, but they are generally incomplete or mutilated.

The "*Arte Vetraria*" may, according to Signor Cecchetti, be divided into six branches, that of the "*fialai*" or "*fiolieri*" (makers of vessels) the "*verieri*" or "*fornafieri*" (makers of glass in mass), the "*cristallai*" (makers of glasses for spectacles), the "*specchiai*" (makers of mirrors), the "*margaritai*" (makers of small beads), the "*perlai*" (makers of large and hollow beads), and the "*venditori*" or "*stazioneri*" (dealers in glass wares).

What relates to the last of these classes does not come within the scope of these notices, but what has to be said respecting Venetian glass-making may be conveniently divided into the sections, 1st, of vessels and window glass; 2nd, of optical glasses; 3rd, of mirrors; and 4th, of beads.

When the branches of the art became well defined, the masters and workmen exercising each kind of industry formed themselves into distinct bodies with special regulations set forth in their several "*mariegole*." Details on this subject will be found in the *Monografia delle Vetraria Veneziana e Muranese*, and in the Abate Zanetti's *Guida di Murano*.

The "*fiolieri*," as has been shown above, were in the thirteenth century already a considerable body, and must have

produced a large quantity of wares, we are told by the chronicler Martino da Canale that in 1268 at the time of the election of the Doge Lorenzo Tiepolo, they exhibited "guastade" (decanter), "oricanni" (scint-bottles), and similar pretty objects, and in 1279 they made measures and weights of glass, as is mentioned in a decree of the Great Council of that year (*Monografia*, p. 9).

In 1275, a law was enacted by the Great Council (*Monografia*, p. 9) prohibiting the exportation of the sand and other substances used in making glass, and also of the fragments of broken glass. Masses of glass, on the other hand, were allowed to be imported as ballast. Several other decrees were made in the course of the thirteenth century by the same authority respecting the making of glass; one of these, of the year 1279, mentions German hawkers or pedlars of glass (*qui portant vitra ad dorsum*).

On the 8th November 1291, it was ordered by the Great Council that the glass furnaces should be demolished in the "Città di Rialto" (that is, what is now called the city of Venice) and throughout the whole "diocesi;" and any reconstructions were to take place without those limits, but nevertheless within the district of Venice (*distretto delle Venezie*). On the 11th August 1292, the severity of this regulation was mitigated by permission being granted to the makers of small glass wares (*verixelli*) to remain even in Rialto, provided a space of fifteen paces were left between the workshops and the houses. These regulations were, of course, to guard against the danger of fire. It is believed that the glass-makers then carried their establishments to Murano, where, however, according to Lazari, there is reason to think that the manufacture had been practised at least as early as 1255,¹ one Spina-

¹ Lazari, p. 90.

bello, "fiolario" was "giudice" of Murano in 1285 (*Monografia*, p. 260).

The import of glass vessels from Venice into the northern parts of Europe we may conclude was not begun so early as the thirteenth century, for the only glass wares mentioned in the full and copious tariff for goods imported at Damm, the port of Bruges, enacted in 1252 by Margaret, Countess of Flanders, are rings of glass: "Vas annulorum vitreorum vel cista, " quatuor denarios."¹

Lanterns for galleys and lighthouses were made at this period at Venice, one of the former in 1289, and a lantern for the lighthouse at Ancona in 1305 (*Monografia*, p. 9).

In 1295 the Great Council renewed the prohibition of the year 1275 against the exportation of the materials of glass, and increased the fines to be levied upon glass-makers who should return to Venice after a sojourn in other states, a petition presented on this occasion states that furnaces had been established in Treviso, Vicenza, Padua, Mantua, Ferrara, Ravenna, and Bologna (*Monografia*, p. 10).

No vessels which can be attributed to the thirteenth or fourteenth centuries have as yet been noticed or described; but something may probably be learnt as to their character by careful examination of pictures of those periods. In a picture of the Last Supper, which formed part of the Campana Collection, several vessels of glass were noticed by the writer: one was a bottle of simple but elegant form, standing on a foot, ornamented by spiral lines winding round it; another was a small covered cup, standing on three balls. This picture was attributed to Margaritone of Arezzo (1212-1289), perhaps erroneously, but it appeared to be at least as early as the fourteenth century.

¹ Sartorius, *Urkundliche Geschichte* 2^o Bd. p. 63.
des Ursprunges des deutscher Haufe,

Glass-painting for windows was carried on at Venice during the fourteenth century. In 1317 one Giovanni "fioler di Murano" received from the Great Council a privilege to make coloured glass for windows as being superior in that art to any other (*melior in dicta arte aliquo alio*) (*Monografia*, p. 11); in 1335 Mastro Marco painted windows for a chapel in the church of the Frari; in 1400 Tommasino d'Axandrii, and in 1404 one Nicolo went to Milan to work on the windows of the Duomo.

The estimation to which the art of glass-making had already attained is shown by some of the enactments of the Senate in the fourteenth century; on the 22nd December 1376,¹ it was enacted that the marriage of a noble with the daughter of a "vetrajo" should not impede the descent of nobility to the offspring, and on the 15th March 1383 a set of regulations was enacted with the view, as is expressed in the preamble, "*ut ars tam nobilis stet et permaneat in loco Muriani*." Nor was this esteem and admiration of the art confined to Venice, for we find Bertrandon de la Brocquière,² in 1432, when at Venice, mentioning Murano as renowned for its manufactories of glass.

On September 17th, 1399, letters patent were issued by Richard II. in favour of Andrea Zane and Jacopo Dandolo, masters of two Venetian galleys then in the port of London, which include a permission for the passengers to sell their small wares on the decks of the galleys, namely, glass vessels and earthenware plates, duty free.³

In 1441 the statutes of the "phioleri," the chief corporation or fraternity of the workers in glass, were made or revised, and the original is preserved in the Correr Library at Venice. The making of windows and of vessels, as has been said,

¹ Lazari, p. 91.

² Travels to the Holy Land.

³ Calendar of State Papers, Venetian,

edited by Rawdon Brown. No. 130,
p. 38.

were the departments of the art which belonged to this corporation, and much energy and skill appear to have been displayed by its members during this century. Among the most distinguished of the company were Don Paolo Godi of Pergola and his apprentice Angelo Beroviero; the latter, in the first half of the fifteenth century, had a well-known glass house in Murano, distinguished by the sign of the Angel. On his tomb, in S. Stefano di Murano, was inscribed an epitaph in which it is said of him "*Cui patuit vitrea quidquid in arte latebat.*"¹

An apprentice of this Angelo Beroviero, one Giorgio, nicknamed *il Ballerino*, is traditionally said to have found the means of copying the receipt-book of his master, and to have sold the secrets he so obtained to another "*vetrajo*," and thus to have gained the means of establishing himself in the same manufacture; he became the head of the house of the *Ballerini*.

Marino Beroviero, son of Angelo, was "*gastaldo*" (President, or as we should say, Master) of the company of *phioleri* in 1468, and appears to have fully maintained the reputation which his father's furnace had obtained, Signor Lazari thinks that to this family the vast progress which the art made during the fifteenth century in Venice, may be in great part ascribed. Other members of both families greatly distinguished themselves as glass-makers during the fifteenth and sixteenth centuries; and both, as well as that of Miotti, and several other of the ancient families connected with the art are still represented in Murano (Guida di Murano by the Abate Zanetti, pp. 216, 354, 355). A youthful member of the Berovier family is now in the employment of Messrs. Salviati & Co. at Murano, and promises to attain great proficiency in the art.

In 1463 a distinction is found to be drawn between the transparent glasses, called "*cristallini*" and the ordinary or

¹ Cicogna, *Inscrip. Ven.* vi. 467.

"comuni." In 1484 mention is made of the small round panes for windows, called "rulli"; these were distinguished, according to size, into "comuni" and "treperpè."

The earliest examples of the skill of Murano which are still preserved, belong, it would appear, to the fifteenth century. A specimen in the Correr Museum at Venice is ascribed by Signor Lazari to circa 1440. It is a cup of blue glass enamelled and gilt; the chief subjects are portraits of a young man and woman in medallions, it may, therefore, very probably be a "coppa nuziale," or marriage cup. No. 409.-'54, engraved in Pl. XIII., is an example of the same kind, but the glass is emerald green. This specimen is thought to belong to the latter part of the fifteenth century. No. 363 in the Slade Collection, Pl. XIII. of the Catalogue, is a cup of blue glass ornamented with a procession of figures, representing a triumph of Venus, and other subjects. Another fine example of the enamelling of this century is a bowl of blue glass, in the possession of Mr. George Field.¹

Other examples are somewhat less elaborately ornamented; a scale pattern executed in several colours, somewhat resembling peacock's feathers, is not uncommon (as No. 5492.-'59), and portions, such as the projecting ribs of a cup, are gilt with a very elegant effect. A sprinkling of gold is also common, produced, no doubt, by gold leaf having been laid on glass, afterwards heated and expanded.² The glass vessels made at Venice at this period in general bear a resemblance in form to the vessels of silver and other metals made in the west of Europe; they are often of a fine shape, but rather massive. The free use of enamel and gilding seems to show that the

¹ Art Treasures, Vit. Ar., pl. ii.

² Examples of this process were no doubt the "ii lytlyll ewers of blew glasse powdered with golde," which were in the chamber of "Domina

G.

"Mylcentia Fastolf" when the inventory of the goods of Sir John Fastolf was taken in 1459 (Archæologia, vol. xxi. p. 269).

f

makers were familiar with the products of the glass-works of Egypt and Damascus; the gilding, however, is much better fixed upon the Venetian than upon the Oriental vessels.

In the latter part of this century the influence of the classical revival made itself strongly felt in every department of art, and we find that the workshops of Murano began to produce, instead of covered cups of Gothic form, vases and tazzas of classical outlines. It is probable that the end of the fifteenth and the earlier part of the sixteenth century are the periods to which may be especially ascribed those vases and other vessels whose elegant forms have ever made them the delight of all who have a true feeling for beauty, and which bespeak the artist rather than the artisan.

Much, however, as we now admire these objects, they excited at least as much or more admiration at the time they were made. Travellers who visited Venice spread abroad the fame of the glass-houses of Murano, as Bertrandon de la Brocquière in 1432, and Brother Felix Faber of Ulm, who was at Venice in 1484; the latter says, that such precious and beautiful glass wares were manufactured nowhere else in the world, and tells a story by which it appears that the Doge and Senate considered a vase of glass a worthy present for the Emperor Frederick IV. when he visited Venice.¹ Articles of glass for ordinary use were also made at Venice at this time. William Wey, Fellow of Eton College, who died in 1474, in the beginning of his itinerary to the Holy Land advises the

¹ Such, however, was not the opinion of the Emperor, who let it fall, and then remarked that glass was in one respect inferior to gold and silver, viz., in being fragile. The Doge took the hint and replaced it by a vase of precious metal. The Venetian estimate of the value of the finer products of their glass-houses was perhaps justified

by the general verdict of Europe. In illustration of this it may be mentioned that in the inventory of Charles the Bold, Duke of Burgundy (1467-1477) a number of vases of coloured glass are included, and among them "ung hanap de jaspre garni d'or à œuvre de Venise." (Labarte, *Hist. des Arts Industriels*, t. iv. p. 572.)

pilgrim, when about to take ship from Venice, to provide himself with "dysches, platerrys, sawferrys, other (*i.e.*, or) "cuppys of glas."

In the first quarter of the sixteenth century the Bolognese monk, Leandro Alberti, visited Murano, and says, that there were then twenty-four glass-houses at work; among the masters he makes special commendation of Francesco Ballerino, and describes, among the remarkable objects made of glass, a galley with all its tackle, a braccio in length, and an organ which produced most melodious sounds.¹

The Venetian Republic manifested the high esteem in which it held the art of glass-making, by the bestowal of peculiar privileges on those who practised it. An enactment of 1490 placed the corporations of glass-makers under the immediate jurisdiction of the Council of Ten, withdrawing them from that of inferior authorities;² and in 1502 the code of law known as the *Statuto di Murano*, which regulated the administration as well as the civil and criminal justice of the island, was confirmed by the Senate. This code remained in force until the fall of the Republic.

Mention has been already made of the measures adopted in the thirteenth century to prevent the carrying of the art to foreign countries. In 1547, according to Buffolin (p. 62), the Council of Ten adopted further measures of precaution with the same view; the Inquisition of State, by the twenty-sixth article of its statutes of 1454, as given by Daru,³ had already ordered, that if a workman of any kind should transport his craft into a foreign country to the injury of the Republic, and refuse to return, an emissary should be commissioned to put him to death. Daru states, on the authority of a report

¹ *Isole appartenenti all' Italia*, ed. 1576, p. 95.

² Lazari, p. 93.

³ *Histoire de la république de Venise*, tom. vi. p. 402.

preserved in the French archives, that this punishment was executed upon two workmen whom the Emperor Leopold had induced to enter into his states.¹

About this period several foreign States procured workmen from Murano and endeavoured to introduce the art of glass-making into their countries. England, Spain, and Flanders were of the number ; in Spain and Flanders some amount of success was obtained, and partly, perhaps, in consequence we find that on the 7th September 1549 (Cal. State Papers, Venetian, No. 574), at a meeting of the glass trade at Murano the artisans complain that they are left out of work two months and a half at a time. At the same time it was agreed that the Council of Ten should be petitioned to take measures to prevent the manufacture from being carried out of Murano. Shortly after the Council of Ten ordered that masters and artisans in glass who were abroad should return, that recusants or those who might afterwards depart should be fined and sent to the galleys, also that no foreigners should be employed in the glass-houses. Some of the results of this measure will be seen in the account of the history of glass-making in England.

The account of the state of the art given by Marcantonio Coccio Sabellico in his book "*De situ Venetæ Urbis*," written about 1495, is so interesting as to deserve quotation at length :
" Murianum inde vicus, sed qui, ædificiorum magnificentia et
" amplitudine, urbs procul spectantibus appareat ; longitudine
" ad mille passus patet ; vitrariis officinis præcipue illustratur.
" Præclarum inventum primo ostendit vitrum posse crystalli
" candorem mentiri ; mox, ut procacia sunt hominum ingenia,
" et ad aliquid inventis addendum non inertia, in mille varios
" colores innumerasque formas cœperunt materiam inflectere.
" Hinc calices, phialæ, canthari, lebetes, cadi, candelabra,

¹ Histoire de la république de Venise, tom. iii. p. 152.

“ omnis generis animalia, cornua, segmenta, monilia ; hinc
 “ omnes humanæ deliciæ ; hinc quicquid potest mortalium
 “ oculos oblectare ; et, quod vix vita ausa esset sperare, nullum
 “ est pretiosi lapidis genus quod non sit vitraria industria
 “ imitata ; suave hominis et naturæ certamen. Quid quod et
 “ murrhina hinc tibi vasa sunt, nisi pro sensu sit pretium. Age
 “ vero cui primo venit in mentem brevi pila includere omnia
 “ florum genera quibus vernantia vestiuntur prata. Atqui
 “ omnium gentium hæc oculis maritima subjecere negotia, ut,
 “ quæ nemo alioquin credibilia putasset, jam nimio usu vilexere
 “ occeperint. Nec in una domo aut familia novitium hæsit
 “ inventum ; magna ex parte vicus hujusmodi fervet officinis.”
 (Lib. iii.)¹

The allusion to “ murrhina vasa ” in this passage, no doubt, has reference to the description of glass called by the Germans “ schmelz,” which was probably at first made in order to imitate chalcedony ; it was certainly known at this time, for we find a receipt for making it in the MS. treatise on glass-making, which dates from 1443, and has been lately published by

¹ “ Thence (*i. e.*, from Venice) Murano, a street, but which from the magnificence and size of its edifices might to those who behold it from afar, appear a city ; it extends a mile in length, and is illustrious on account of its glass-houses. A famous invention first proved that glass might feign the whiteness of crystal, soon as the wits of men are active and not slothful in adding something to inventions, they began to turn the material into various colours and numberless forms. Thence come cups, beakers, tankards, caldrons, ewers, candlesticks, animals of every sort, horns, beads (?), necklaces, hence all things which can delight mankind, hence, whatever can attract the eyes of mortals, and what we could hardly dare to

hope for ; there is no kind of precious stone which cannot be imitated by the industry of the glass-workers, a sweet contest of nature and of man. Hence come vases the equals of the murrhine, unless cost may be a source of pleasure. But consider to whom did it first occur, to include in a little ball all the sorts of flowers which clothe the meadows in spring. Yet these things have been under the eyes of all nations as articles of export, and what no one would otherwise have thought probable by too great familiarity have become common. Nor has invention been confined to one house or family, the street glows for the most part with furnaces of this kind.”

Milanese (in Disp. LI. of *Scelta di Curiosità Letterarie Inedite o Rare*), silver and oxides of iron and copper dissolved in "aqua fortis" (nitric or muriatic acids?) are the colouring materials.

It seems from this account that the invention, or more properly, the re-invention of *mille fiori* was made before the end of the fifteenth century, that of *vitro di trina*, lace or reticulated glass, appears to have soon followed, for it is described by Biringuccio in his *Pirotechnia* (Book II. cap. xiii., the first edition of which was published in 1540,) in the following words: "risguardinsi ancho non solo le cose picchole ma le grandi che fan di vetro bianco o d'altri colori, che paiano intessuti di vimine con quanta egualità e giustezza di termini con coloro eparii locati" (*i.e.*, "Regard being had not only to the small things but to the large, which are made of white or other coloured glass, which seem as if woven of twigs placed with so great equality and correctness of bounds.") It has been already remarked that these two methods of ornamenting glass vessels were re-inventions, for there can be little doubt but that they were suggested by the specimens of antique glass which were occasionally found. Biringuccio gives a lengthy description of two specimens of antique mosaic glass which he had seen,¹ and the like were no doubt eagerly sought for and studied by the active and intelligent glass-makers of Murano.

These beautiful and diversified productions were highly valued at the time they were made, and were thought worthy to appear at the festive entertainments of the highest classes of society, where they took very much the place which porcelain now occupies, just as happened in the later Roman period. In the early part of the sixteenth century Oriental porcelain was of the greatest rarity in Europe; majolica was then only ap-

¹ Such fragments were often used at Rome by the workers in mosaic, in conjunction with other pieces then newly made. Examples of the twelfth and thirteenth centuries may be found at Rome.

proaching its highest point of perfection, and the other earthen manufactures were of a very rude description. No wonder that the luxurious great of the time sought variety from the monotony of gold and silver by availing themselves of this beautiful manufacture, which almost daily offered new forms and new colours capable of pleasing the most fastidious taste.

It appears from the passage quoted from Sabellico that the practice of making vessels in the forms of animals, &c., was fully established in the fifteenth century; probably, however, few, if any, examples of the work of that, nor many of even the following century, are now in existence, most of those preserved in collections are most likely the work of the seventeenth century, during at least the earlier part of which such vessels continued to be in vogue; René François, Chaplain to Louis XIII., of France, mentions them in a curious passage (quoted by M. Burty, *Chefs d'Œuvre des Arts Industriels*, p. 271), in his "*Essay des Merveilles de la nature et des plus nobles artifices*," in the following terms: "Murano de Venise a beau temps d'amuser ainsi la soif et remplissant l'Europe de mille et mille galanteries de verre et de chrystal fait boire les gens en depit qu'on en ait; on boit un navire de vin, une gondole; on avale une pyramide d'hypocras, un clocher, un tonneau, un oyseau, une baleine, un lion, toute sorte de bestes potables et non potables. Le vin se sent tout étonné prenant tant de figures, voire tant de couleurs, car dans les verres jaunes le vin clair et l'y fait tout d'or, et le blanc se teint d'écarlate dans un vin rouge. Ne fait-il pas beau voir avaler un grand trait d'écarlate, d'or, de lait, ou d'azur?"

From this we see that these strangely shaped vessels were not merely objects of curiosity or parade, but intended for at least exceptional use.¹

¹ In the English edition of M. Burty's work the above-quoted passage is thus translated: "Murano of Venice may well thus play with thirst and by filling Europe with thousands and thousands of pretty courtesies in glass

A curious and instructive instance of the variety of articles, and the extent to which they were employed in a royal household, is afforded by the inventory of effects belonging to King Henry VIII. in 1542, which were under the custody of Sir Anthony Denny at the Palace of Westminster.

As the greater part of the articles of glass were no doubt of Venetian workmanship, it will not be improper to notice them here in connexion with the history of the Venetian manufacture. Nearly 450 articles of glass are enumerated, consisting of bottles or flagons, "layers,"² ewers and basons, bowls, standing cups, goblets, "glasse like pottes," sometimes with covers and sometimes with "eares," and with one or more handles, "great glasse like bolles standing upon fete," "cruses," spice plates, "lowe candlestickes," "great bell candlestickes," "aulter candlestickes," trenchers, spoons (the handles only being of glass), "platers, disshes and sawcers," a "casting bottell," a "baskett," and a "Hollywater Stocke with a bayle."

Many of these were of blue glass, or of blue glass partly gilt, one "leyer" is of "blewe glasse partly gilt, the leyer "having the Kinges Armes gilt upon it." One bason and ewer, several bowls, cups, and the "baskett with two eares," are of "diaper work of fundry fashions," probably "vitro di trina." Many of almost every sort are of "jasper colour," doubtless what we call schmelz, a few are described as "painted

"and crystal force people to drink
"because they possesse them, they drink
"a ship or a gondola full of wine, they
"swallow a pyramid of hypocras, a
"belfry, a tub, a bird, a whale, a lion, in
"short every sort of animal potable or
"otherwise. The wine itself is quite
"surprised to find that it has so many
"and such different identities, so many
"colours, for in yellow glass claret
"becomes as gold, and in a red glass

"white wine becomes scarlet. Is it
"not fine to see scarlet, gold, white,
"and azure swallowed down at one
"draught?"

¹ Communicated by Mr. Burt to the *Archæological Journal*, vol. xviii., from the original MS. in the Record Office.

² Vessels for washing with covers and sometimes spouts.

white galley fashion," *i.e.*, enamelled white, like majolica. A few articles, among them some spice plates and some cruses, are of green glass. Two "litle standing cuppes with covers chalice fashion," and some glasses "like pottes," and a cruse are of "glasse of many colours," possibly mille fiori. Four standing cuppes were of blew glass "paintid and gilt." Four glasses and one little glass are described as having "long smale neckes and great bellies." These last were probably specimens of those strangely shaped glasses which have been supposed to have been intended for alchemical purposes.

There is one article described as "oone glasse garnisshid in the top with silver like a frame with belles of silver hanging in it," and "oone thike glasse of cristall with a cace of lether lyned with crymsen vellat."

A "lowe candlestick," is of jasper colour, and four "lesse bell candlestickes" of glass, partly gilt. The expression, bell candlestick, describes a form well known through Venetian examples of brass, engraved and damascened, which exist in collections; but candlesticks of glass of this period are rare.

The casting bottle was, no doubt, of the same fashion as those still used in the East for sprinkling perfumes over guests. The Hollywater stock was a small pail for holy water; Mr. Burtt supposes the "bayle" to be a handle, but it is probably a ladle.¹

A curious example may still be seen of a banquetting table, set out with its services of glass, which probably remains, for the most part, as when originally arranged about this period. This is to be found in the Sacro Monte, at Varallo in Piedmont (*see*

¹ Handles are repeatedly mentioned in this inventory by that name, bayle only occurs in this instance. The highly ornamented brass water vessels of the same period, made at Venice, were sometimes, perhaps always, furnished

with corresponding ladles, and a ladle of glass is amongst Mr. Cooke's collection of Venetian glass now in the Museum on loan. To bale a boat is a well known expression.

Murray's Handbook for Switzerland and Piedmont), where is an assemblage of about fifty oratories, each containing groups of figures of life-size, modelled in clay, with backgrounds painted in fresco, and all the accessories required by the subjects, which are nearly all events in the history of our Saviour. In that of the Last Supper, the table and a sideboard are furnished with vessels of Venetian glass, chiefly tazzas and cups, and as the oratory is locked up and glazed in front, these articles may very possibly have remained uninjured from the time at which they were first placed there. The Sacro Monte was commenced about 1486, but the greater part of the oratories were constructed during the first seventy years of the sixteenth century.

A very curious account of the employment at banquets of these ornamental vessels may be found in the "aggiunta" (dated Venice, 1593) to *Il trinciante* of Vincenzo Cervio, in which is a description of the banquet given at Mantua in May 1581, at the marriage of the Prince of Mantua, in the following words: "Vi erano oltre le ricchissime credenze e "bottigliarie ordinarie una prospettiva di diversi bicchieri, "carrafe, e giarre, e altri bellissimi vasi di cristallo di Venetia, "che credo vi fussero concorse tutte le botteghe di Morano; e "di cio ve n'era di bisogno poiche tutte le signore convitate "doppo che havevano bevuto rompevano il bicchiere che "tenevano in mano per segno di grande allegrezza."¹

This usage of breaking the glasses after drinking from them will be familiar to all acquainted with the social customs of this, as of other European countries, in the sixteenth and seventeenth centuries. It must have been eminently "good for

¹ *i.e.*, "There was there, besides most rich sideboards and ordinary glass-ware, a display of various beakers, decanters, jars, and other most beautiful vessels of Venetian crystal, so that I

think all the shops of Murano had met there; and of that there was need, for all the signori invited, after they had drunk, broke the beakers, which they held as a sign of great joyfulness."

"trade," and no doubt contributed much to the prosperity of Murano.

Avanturine glass, that in which numerous particles of copper (or of silicate of copper) are diffused through a transparent yellowish mass was, according to the Abate Zanetti, invented about the beginning of the 17th century by one of the Miotti, that family preserved the secret of making it, and in 1772 M. de la Lande says that it was made in one glass-house only. Even now it is only made in two or three and sells for from four to eight shillings per pound. An interesting account of its fabrication will be found in *Le Verre*, by M. Peligot, p. 452.

During the seventeenth century the manufacture of glass continued to prosper at Murano, and many of the larger and more striking objects preserved in collections may be attributed to this period.

England, during the same period, imported large quantities of glass for table use from Venice. In the Sloane MSS.¹ in the British Museum are copies of several letters addressed, in 1667, by an English glass merchant, John Greene, of Holborn, to Signor Alessio Morelli, his correspondent at Venice, specifying the forms and colours of the vessels which were to be sent.

The Comune of Murano had the privilege of causing a certain number of medals or tokens to be annually coined at the Venetian mint; these were made of the same size as the coins known as *oselle*, and bore the arms of the reigning Doge, of the Comune, the Podestà, the Chamberlain, and the four deputies of Murano. These coins were presented to the local magistrates and to some of the higher authorities of the Venetian Republic. When it was desired to make a present to some distinguished visitor to the island one of these was enclosed in the substance of the bottom of a cup, and thus

¹ Add. MSS. 855.

formed, as Lazari remarks, a significant present, and a memorial of the special industry of the island and of the ample privileges with which the sovereign state had honoured it. The first of these "*oselle Muranesi*" which has been preserved is of the year 1581; there is a lacuna in the series from thence to 1673, from which it is nearly complete until 1796.¹

The mode of enclosing a coin is illustrated by a specimen in the Slade collection (No. 682), where a *mezzo zecchino* of the Doge Francesco Molini, 1646-55, is enclosed in the stem of the goblet.²

During the eighteenth century the manufactories of England, France, and especially of Bohemia, had begun to compete successfully with those of Murano; the cut-glass in particular which they produced had come into fashion, and the demand for the peculiar productions of Venice was correspondingly reduced. One of the manufacturers of Murano, Giuseppe Briati, determined to learn the new processes by which the Bohemian glass-makers were enabled to obtain such beautiful results, and accordingly worked for three years in a Bohemian glass-house in the disguise of a porter. Returning to Venice he obtained, in 1736, a patent for ten years to manufacture glass after the fashion of Bohemia; his neighbours at Murano, however, persecuted him so much, through envy at his success, that in 1739 he obtained permission to establish a glass-house in Venice itself, which he did in the street known as that of the Angiolo Raffaele (or, according to the Abate Zanetti, in the Contrada dei Carmini). Here, according to Signor Lazari, he worked for many years with very great success, particularly in the manufacture of mirrors with frames of glass, ornamented

¹ There is a good, though not complete, series of these *oselle* in the British Museum, commencing in 1674.

² In the British Museum is a drinking glass, stated to have come from the

Palace of Whitehall, in the stem of which is enclosed a threepenny-piece of Charles II., dated 1679. The glass seems hardly, however, to be so ancient.

either in intaglio or with foliage of various colours, and also on the production of chandeliers with flowers, leaves, and bunches of grapes.

Briati was also most successful in the making of vases of "vitro di trina," or "filigrana;" these, says Lazari, he made with such taste and lightness, and of forms so fully equal to those of the best productions of the cinque-cento period, that the vases of Briati are often supposed (particularly in England) to be of an earlier period. The works of Briati may be distinguished, he thinks, by the superior purity and brilliancy of the glass; they were so much admired, that at the public banquets of the Doge they were placed on the sideboards among the gold and silver plate, and the demand for them and the quantity made were proportionately great. M. de la Lande, who visited Venice in 1765-66, mentions Briati as making objects of the greatest delicacy, and particularly lustres, 6 or 7 feet in diameter, which were known as "ciocche."¹ Briati died in 1772. At the time of his visit there were fifteen glass-houses working at Murano, but only one, that of "Jean Mota" made mirrors, the largest of which measured $4\frac{1}{2}$ ft. (French)² square. No mirrors, he says, were preferred to those of Venice, except the French, which, however, were twice as dear.

The fall of the Republic was accompanied by the interruption of trade and the decay of manufacture, and the glass makers had to confine themselves to the production of beads and of articles of a common sort for domestic use. In the year 1838 a revival of the ancient processes of glass-working was commenced by Sig. D. Bupolin, carried on by Cav. Pietro Bigaglia, Sig. Lorenzo Radi, and others (*v.* Monografia, p. 52), and in our own day Comm. Salviati and his English associates have not only imitated with great success the ancient models, but have struck out new ideas, and great taste, invention, and

¹ *Voyage en Italie.*

² 4 feet $9\frac{1}{2}$ in. English.

appear to have been tried in the fifteenth century, as it is mentioned by Sabellico.

6th. Reticulated, filigree, or lace glass; called by the Italians "vitro di trina," "di filigrana," "a ritorti," and "a reticelli." These varieties contain fine threads of glass, generally coloured, but sometimes milk-white (*lattice*) included in their substance, and are certainly among the most beautiful of the products of the skill of Murano. The idea was, no doubt, borrowed from antique fragments, but the Venetians far surpassed the ancients, if we may judge the latter by what has come down to us. M. Labarte has given an elaborate account of the manner in which many of the patterns were produced. The general outline of the process is as follows:—Canes were prepared enclosing threads of opaque white or coloured glass; these were placed side by side in a mould, and a thin bubble of glass blown into the midst, so as to adhere to the canes; the whole was then reheated and formed into a hollow cylinder, which was then fashioned in the same manner as any ordinary glass. An infinite variety of patterns may, it is evident, be produced by modifications of this process. A still further intricacy was obtained by using two cases or cylinders, the lines of which ran in contrary directions; when one of these was placed inside the other and the two welded together, a reticulated pattern was produced. A small bubble of air was left at each crossing of the canes, as each of them would project a little above the general surface of the cylinder or case of which it formed a part. An extraordinary amount of dexterity and skill in manipulation must have been required to produce works so minute and delicate in their details and so perfectly exact and regular in their patterns, as are the finest specimens of this kind.

Vessels of all sizes and forms were made of this "vitro di trina," or lace glass, comprising cups, drinking glasses, ewers,

tazze, and circular dishes. Lazari mentions an example of the last, in the Correr collection, measuring nearly 23 in. in diameter (55 centimetri), as one of extraordinary size. This he attributes to the manufactory of Briati.

The thinness of Venetian glass made it unsuitable for cutting or engraving; but in the eighteenth century the desire to produce objects in the fashionable style of the time induced the manufacturers, and probably Briati in particular, to make some essays in those modes of ornamentation; one of these in the Correr Museum, a decanter, has the arms of Foscari with a cypher of A and F, cut with the wheel; this was, no doubt, made for Alvise Foscari, Doge of Venice from 1735 to 1741, and probably by Briati. A few examples are engraved with ornaments of flowers and foliage with a diamond point; this, however, was also done in Germany, as Matthesius,¹ writing about 1562, mentions the practice.

Very few notices of the making of glass for mosaic are found either in the *Mariegole* or other documents. In 1317 a decree of the Great Council granted to Giovanni di Murano "fiolajo" permission to work in making "smalti" even during the months when the making of glass was prohibited. In 1589 Pietro Ballarin made "smalti" of various colours and with gold ground, and furnished these for the mosaics of St. Mark's church, the former cost 14 the latter 19 ducats per 100 lbs. "fottile" (*Monografia*, p. 268).

The "cristallai," by which name the makers of glasses for spectacles came to be known, would appear to have owed it to the fact that lenses were first made of crystal and afterwards of glass. Eye-glasses are believed to have been invented by Salvino Armato degli Armati, a Florentine, about the year 1286. Alessandro Spina is sometimes credited with the invention. Signor Cecchetti has found in a "capitolare" of the workers in

¹ In his fifteenth Sermon, p. 902.

crystal, under date of the 2nd April 1300, a prohibition to buy or sell several classes of objects of white glass counterfeiting crystal, among these are "roidi da ogli" and "lapidas ad legendum," obviously lenses. Before long, however, this prohibition was withdrawn, and in 1301 permission was given to make "vitreos ab oculis ad legendum." This branch of glass-making continued for a long time to flourish at Venice, Garzoni (circa 1580) in his *Piazza Universale* names two spectacle makers at Venice as being in the greatest repute, among the many who practised the art.

The principle of forming a mirror by backing glass with metal was, if not known to the Romans of the Imperial period,¹ well known in the Middle Ages. John Pecham (circa 1279), in his *Treatise on Optics*, says (Prop. 7) that mirrors of glass are lined with lead ("specula vitrea sunt plumbo subducta"); and in Proposition 4 alludes to the use of lead. Roger Bacon, Vincent of Beauvais, and Raymond Lully, all state the same thing. Beckman ("Hist. of Inventions," Art Mirrors,) says, that before A.D. 1500 mirrors were made in Nuremberg, by blowing into the glass bubble, still hot, a metallic mixture with a little resin or salt of tartar. The bubble was then cut into small round mirrors.

The MS. treatise of the middle of the fifteenth century, which has been already mentioned, gives a receipt,² by following which it is stated that a good mirror will be made; it is clear that the result of the process would be merely to apply to the glass a leaf of lead slightly alloyed with tin; as there is no mention of quicksilver, it is evident that the author of the

¹ Two ancient mirrors of glass said to have been found in a tomb at Sak-kara near Memphis are in the museum at Turin (Peligot, *Le Verre*, p. 213).

² No. LXXII. A face specchio. Piglia lib. una di piombo e onc una di

pece ispagnuola e cola el piombo poi vi metti la pegola infino che l' furumo da le vada via e poi vi metti dentro tanto stagno, quanto e un granello di cece e poi con questo imbratta il vetro dell' uno de' lati et verrà bello specchio.

receipt had no knowledge of the modern system, by which an amalgam of lead or tin is applied to the glass. The invention of this modern system seems to have been made in Germany in the fifteenth century, as will be mentioned hereafter ; but for another century metallic mirrors were evidently preferred to those of glass.

The first mention of the making of glass mirrors at Venice would appear to be a petition from Nicolo Cocco and two others, in A.D. 1317, stating that they had made an agreement with a "magister de Alemania" who knew how to work glass for mirrors (*qui vitrum a speculis laborare sciebat*), that he had broken his agreement and departed, leaving on their hands a great quantity of alum mixed with soot (*aluminis gatini compositi cum fuligine*¹) and they asked permission to sell the alum in question, the exportation of which from Venice was prohibited (*Monografia della Vetraria Veneziana e Muranese*, p. 11).

A document of doubtful authority (*v. Monografia*, p. 26) states that one Vincenzo Redor or Roder introduced at Venice the manufacture of mirrors of glass, but there is some evidence that in 1498 some attempt had been made to commence it (*v. Monografia*, p. 265). Soon afterwards, viz. in 1507, we find that two men of Murano, Andrea and Domenico dal Gallo, addressed to the Council of Ten a petition, stating that they possessed the secret of making good and perfect mirrors, a secret which had hitherto been in the exclusive possession of one German glass-house, which, associated with a Flemish house, had monopolised the trade, and asking for an exclusive privilege for twenty-five years.² One for

¹ Soot was mixed with alum in order that it might assist in burning the sulphur existing in that salt, and leave the alkali free. Alum made bad glass, and its use was therefore prohibited.

² "Con lo ingegno fatica e spesa

" nostra tandem trovâ el secreto de far
 " specchij de vero cristalin cossa pre-
 " ciofa et singolar, per non esser in
 " tutto el mondo se pol dir alcuno
 " habia questo secreto che sia bon e
 " perfetto salvo che una sola casa in

twenty was accordingly granted. Such, probably, were the mirrors which Pigafetta (who accompanied Magellan in his voyage round the world between 1519 and 1522) says were taken with them; that they were of glass is proved by his statement that many were cracked (*spezzati*). It would, however, seem that the glass mirrors made even in the sixteenth century were not very perfect, for metal plates continued to be used, as may be seen in the magnificent mirror case of steel damascened with gold in the South Kensington Museum, which was made in 1550. The plate of the mirror in the Louvre, presented to Marie de Medicis by the Republic of Venice in 1600, is said to be of rock crystal.

The "*specchiali*" or mirror-makers formed themselves into a "*scuola*" or corporation, according to Sig. Cecchetti (*Monografia*, &c., p. 27), in 1569-1570, and their "*Mariegola*" compiled and assented to by 60 of the trade received the approbation of the "*Provveditori di Comun*" and the "*Giustizieri Vecchi*" in 1569.

By one of the regulations every one claiming to be admitted as a "*capo maestro*" had to prove his ability to flatten and polish a piece of glass of 17 (inches?), and to apply the "*foglia*" or leaf of metal. The Venetian mirrors were formed by blowing glass into cylinders which were then slit, flattened out on a stone, and polished on a table. During the ensuing two centuries mirrors were made in very large quantities at Murano and exported to almost all countries both east and west. In 1664 the Bishop of Beziers, then French ambassador at Venice, when writing to Colbert (*Pelicot, Le Verre*, p. 217) estimates the value of the mirrors sent to France at 100,000 crowns annually.

" Alemagna; quale ha corrispondenti
 " cum un' altra in Fiandra de dove se
 " fornisse . . . tutto el mondo ven-

" dendo a precij eccessivi a suo modo."
 (Monografia, p. 36.)

The efforts made in France and England during the seventeenth century to manufacture mirrors were eventually successful, and as has been said above (p. xciii) in 1772 only one glass-house at Murano continued to make mirrors.

The last branch of glass manufacture at Venice which has to be mentioned is one more peculiar to that city than any other, viz., that of bead-making, "*Arte delle Conterie*."

Signor Cecchetti is of opinion (*Monografia*, p. 13), that the manufacture originated with the "*cristalèri*," or workers in rock-crystal and other hard stones, who were led to imitate in glass the materials from which they made beads for rosaries or ornament, and that were, so to speak, the ancestors of the "*paternostre*" (makers of rosaries), "*margaritai*" (makers of small beads), and "*suppialume*" (*soffia-lume*, those who made large and enamelled beads by the help of the blow-pipe); so much was this true that the "*mariegola*" of the *Cristalèri* became the "*Matricola Arte privilegiata de suppialume*." This transition, according to Sig. Cecchetti (*Monografia*, p. 266), took place about 1525.

This writer inclines to the opinion that the Muranese owed to Germany the invention of the art of bead-making, founding this supposition upon a decision of the Capitolo of the Art in 1510 (v. *Monografia*, p. 14), which he prints at length from the *Mariegole dei Verieri di Murano*. This document states that about twenty years previously the Germans had devised to cause the glass-makers of Murano to make rods of common crystalline and variously coloured glass which they carried into Germany, and there worked, pierced and threaded, then brought them back to Venice, and shipped them to the Levant, where, it is said, such merchandise is in great reputation; it is therefore ordered that any of the masters in Murano may work, pierce, cut, and polish such canes, and make long and short paternosters by means of mills or of lathes, or otherwise. The

reason assigned for this ordinance is, that the trade may remain in Murano and not pass into foreign lands.¹

With all the deference due to the opinion of one so capable of coming to a correct conclusion as Sig. Cecchetti, it must be remarked that this document appears by no means to warrant that at which he has arrived. The object to be attained is stated throughout, to be that of preserving to Murano an existing trade, not of creating a new one; what had really taken place was probably that the Germans finding that in the mountains labour was to be had at a very cheap rate had adopted a system by which the rods were cut and polished in German territory instead of at Murano, the makers of the rods having possibly been prevented, from working them into beads by privileges appertaining to the corporation of "cristalleri." This decision was probably one of the steps leading to the fusion of that body and the bead-makers, which took place in 1525.

It is very unlikely that while for many centuries the Venetians had been carrying on an active trade with the East, where beads must have been always in demand, and for at least three

¹ " . . . Et acciocchè si nobile mestier (i.e. of glass-making) romagni qui in Muran . . . et non vadino in terre aliene, essendo stato trovato da anni vinti in qua in circa da Todeschi una invention de far far a noi verieri da Muran canne de vero comun cristalline et colorade de diversi sorti le quali loro Todeschi portavano in terra todesca ditte canne et quelle scavezzade et infilzade et lavorade le conducevano qui in Venetia et navegasse per Levante et essendo hora questa mercadantia in colmo et in reputatione per il ditto viazo volendola conservor nel mestier nostro di verieri di Muran, com' e con-

veniente è necessario proveder di opportuno rimedio; però l'andrà parte che cadauna bottega de verieri da Muran et maestri di quella possa far far paternostri corti et lunghi si in Muran come fuori di Muran con tutte quelle maniffatture faccie et facciate si vorranno et faranno ordinate. Et similiter far et far far cannelle et spolette et tutte cose che potessero in advento occorrer del mestier nostro si de cristallini come de vero bianco maffizzi et soppiadi à torno et à muola et etiam senza muola come a noi meglio parerà far del ditto mestier nostro," &c.

largely engaged in making glaſs, they ſhould be at laſt indebted to the Germans for the idea of making objects of ſo ſimple a character.

Some beads may no doubt have been made in Syria, but ſurely it is more likely that a large part of thoſe ſent to the Eaſtern market were made at Venice; if ſuch had not been the caſe it would have been ſtrange that Germans ſhould have thought of manufacturing them. In the *Mariegola dei Criſtalleri* (v. *Monografia*, p. 224), are repeated prohibitions, enacted in the fourteenth century, directed againſt thoſe who made of glaſs ſuch objects as were uſually made of cryſtal or other hard ſtones. Theſe prove that the making of ſuch objects in glaſs was often attempted, and very probably by ſome of thoſe whoſe ordinary occupation was the making of beads, bracelets, rings, &c.

Whenſoever the art of bead-making became fully eſta- bliſhed it is certain that in the ſixteenth century it had become one of much importance at Venice. It was divided into two branches, that of the “*Margaritai*,” makers of ſmall, and “*Perlai*,” makers of large beads; theſe laſt are ſometimes called *Paternoftreri*. Theſe two made their products by different proceſſes; that employed by the *Margaritai* (v. *Monografia*, p. 125), has ſince circa 1800, conſiſted in breaking the tubes or rods of glaſs into ſmall pieces, each of which is to form a bead; theſe are placed in a mixture of lime and charcoal called “*ſiribiti*,” which filling the holes in the fragments, prevents their being cloſed during the ſubſequent firing. The fragments are then placed, with a mixture of ſand and charcoal, in an iron veſſel (*tubo*), which is ſo adjusted over a furnace that a kind of rotatory motion can be given to it. By this means the ſections of tubes are formed into globes; they

¹ As everywhere elſe in the Middle Ages each trade corporation had at Venice a privilege of doing certain work or of ſelling ſuch and ſuch articles.

are then shaken in bags, by which operation the stoppings are removed, and they are finally polished by being shaken in sacks with bran. According, however, to the Abate Zanetti (*Monografia*, p. 129), the "tubo" has only been in use since the beginning of this century, small beads having been previously made "a ferraccia," a process described as being much less expeditious.¹

The large beads, "perle," were made by placing the fragments of "canne" on an iron cylinder (*spiedo*), and exposing them to the heat of a furnace, or by twisting the glass in a state of semi-fusion round the *spiedo*, and working it into a bead either with the help of a tool or by rolling it on a slab of marble.

A section of the bead-makers were the "fuppialume," those who formed or ornamented beads by the help of the blow-pipe. All those ornamented externally with foliage, flowers, &c., of glass or enamel, are made by this process. One Andrea Vidaore is credited with its invention in the year 1528, but it would appear that the fact cannot be proved documentarily (*v. Monografia*, p. 266). In 1629 they were compelled to be inscribed among the members of the "scuola" of the "pater-nostreri" and "margariteri," but in 1648 they partially severed themselves from that association, and had thenceforward a separate council and president. In 1731 this branch of the art was so extensively practised that it is stated by the brothers Bertolini that 800 lbs. of oil were daily consumed in the lamps employed. Towards the end of the century from 600 to 1,000 workmen found occupation at the lamps.

In the eighteenth century a prodigious quantity of beads

¹ Unfortunately the authors of the *Monografia* nowhere tell us what this process was, it may be surmised that a rod was heated and divided by a properly formed iron, by which process

a bead would be formed. In 1731 the Margaritai made use of "certe padelle di rame" copper pots or crucibles (*v. Monografia*, p. 17).

was made at Murano. About 1764 twenty-two furnaces were employed in that industry, with a production of about 44,000 pounds per week, one house at Liverpool about this period bought beads to the value of 30,000 ducats annually (*Monografia*, p. 20).

It may be readily conceived that a vast variety of patterns were produced. A tariff drawn up in 1800 contains an enumeration of 562 species, and a "grandissimo," number of sub-species of beads.

The manufacture continues to be one of great importance, the annual export amounting in value to nearly 200,000*l.* per annum (*Monografia*, p. 197).

A few words may be said, in conclusion, upon the composition of Venetian glass. Its lightness and strength are, as is well known, due to its not containing lead like our modern flint glass; and this lightness enabled the makers to produce those miracles of delicacy and lightness which we admire so much. As has been seen, earnest endeavours were made to keep the processes of manufacture secret, and these have so far succeeded that few particulars of the manner in which the manufacture was conducted have been made public. The MS. of 1443 mentioned above, contains many recipes for making various kinds of glass, but they are difficult to understand, the words used being unfamiliar and their meaning obscure, one recipe directs 200 lbs. of the rough soda, 40 lbs. of tartar (gromma) deposited from wine, 150 lbs. of pebbles from the Ticino, and 7 oz. of manganese, to be used to make "cristallino." Alum was used as early as the fourteenth century, as has been mentioned above (p. xcix), as a material supplying alkali, but it produced bad glass, and its use was therefore prohibited by decrees of the Great Council in 1306 and 1330 (*Monografia*, p. 11). Biringuccio (*Pirotechnia*, Lib. ii.) tells us that the materials for glass were alkali, obtained either from the ashes of a "herba calida," brought from Syria or from the

neighbourhood of Maguelonne, near Montpellier, or from those of fern or of "uznea"¹ (moss, or lichen, or seaweed?) and pebbles of white quartz,² or if these were not to be had, white, sharp sand. Two parts of the sand, or pebbles, and one of the alkali were to be well mixed with a certain quantity of manganese, and the whole melted in a reverberatory furnace. The mass thus obtained when broken up, he says, was called "fritta," and he then proceeds to give directions respecting the form and dimensions of the furnaces and pots in which the glass was to be melted for working.

Garzoni, who wrote about 1580, in his *Piazza Universale*, gives a very similar account, but says that the glass made with the alkali obtained from fern ashes was yellow and weak, and calls the plant named "uznea" by Biringuccio, "ugnea."³ The ashes brought from the East or from Syria, according to him, were the best, but they were also brought from France. It seems not unlikely that the *cenere* obtained from *ugnea* or *uznea* was kelp. Iron calcined, he states, gave a red colour, tin a white, copper a green, and lead an emerald hue.

Much information will be found in a work lately published (*Le Verre* by M. Peligot) on the chemistry of glass, and the means by which various colours are produced, it however describes modern rather than ancient practice.

The productions of Murano so entirely eclipsed those of other Italian cities, that it is difficult to find any mention of their efforts in glass making. Much painted glass was, however, produced in Italy all through the Middle Ages, and all doubtless was not made at Murano; it has been stated above

¹ "Tal cenere chi dice che la si fa di felce e di uznea qual di questa hor si non importa." (*Pirotechnia*, lib. ii. c. xii.)

² "Quelle pietre vive et bianche di fiume vista chiare e frangibile, e che hanno certo aspetto di vetro."

³ John Florio in "Queen Anna's New World of Words," published in 1611, explains *ugnea* as "a kinde of earne of whose ashes they make the best kinde of glass."

(p. lxxviii), that a petition presented to the Grand Council of Venice in 1295 asserts that glass furnaces existed in seven of the most important cities of northern Italy, and it appears, from an *Acte Testimonial* published by Mr. Filon (*L'Art de terre chez les Poitevins, &c.*), that in the city of Faltare (Falletto?), in the Marquisate of Montferrat, there were confuls of the art of glass making in 1495. About 1623 Sir R. Mansel procured a "whole company of glass makers from Mantua" (Col. of State Papers, Dom. Series, 28 Jan. 1634), and in the same year Capt. Anthoine Miotti addressed a petition to Philip IV. of Spain, in which he asserts that Rome had two establishments for glass making, Florence one, and that Milan and Verona had tried to set such on foot. Probably some of the vessels which we suppose to be Venetian are the produce of some of these glass houses. It seems strange to find that notwithstanding so much glass-making, glass was but little used for windows, yet Sir R. Worsley (MS. Journal of Travels, at Brocklesby Park, Lincolnshire), wrote in 1688 "A pretty big town called Murano where they make y^e fine Venice glass, in all the great towns of Italy except Genoa and this city they have paper in their sashes instead of glass."

GLASS IN FRANCE.

Pliny (Lib. xxxvi., cap. 66, 67) tells us that glass was made in Gaul, and there is good ground for thinking that glass-making was carried on there on a considerable scale and in many places. In the Musée Lapidaire at Lyons is preserved an inscription, No. 171 (*Notice du Musée Lapidaire de Lyon, par M. Comar-mont, p. 48*), to the memory of Julius Alexander, a citizen of Carthage and worker in glass.¹

¹ "D.M. et memoriæ æternæ Juli Alexsadi natione Afri civi Carthagi- nesi omni optimo opifici artis vitriæ," &c.

Much antique glass has been found in Normandy and in Poitou; in the former country many vessels of a somewhat peculiar form, simulating small barrels, have been found in tombs, probably of the second or third century, they bear the maker's marks, Fro, Front, Frontiniana ("Le Seine Inférieure," by Abbé Cochet). The name Amaranus appears on a fragment of glass found at Brotonne (Cochet), and Galgacus on a vessel found in Poitou (Fillon, *l'Art de terre*, &c., p. 186).

It seems probable that glass-making went on in several parts of France under the Merovingian dynasty; vessels of glass are frequently found in sepulchres of the sixth century. Ruricius, Bishop of Limoges, circa A.D. 506, writes (*Lib. i.*, epist. 12) of a Vitarius,¹ and Fortunatus, Bishop of Poitiers (ob. 609), in describing a grand banquet, says that birds were served in dishes of glass.

About A.D. 675 Benedict Bishop procured from France workmen to make glass for the church of the monastery at Wearmouth (Bede, *Lib. i.* cap. 5). In 677, according to Filiasi (*Saggio dell' antico commercio*, &c.), many Greek workmen went to France to work in glass.

M. Fillon (p. 197) quotes a diploma of Louis le Debonnaire (A.D. 825) in which a "Portus Vitrearie" is named as a bound-mark in the "pays d'Herbauges," and (p. 198) finds mention of a Robertus Vitrearius in a charter of 1088. The same writer instances many other glass-makers of the thirteenth, fourteenth, and fifteenth centuries, who worked in Poitou. In 1466 twelve dozen glasses and one dozen ewers were rendered from the glass-works of La Ferrière to the Abbess of S^{te}. Croix at Poitiers, for liberty to collect fern on her land (Fillon, p. 202).

¹ "Vitrium . . . me destinasse significo cujus opus nitore non fragilitate oportet imitare."

Scarcely any examples of artistic efforts which can be supposed to have come from these medieval glass houses are now extant; but M. Fillon has engraved a drageoir with the arms of Charles VIII. of France (1470-1498), and foliage in gold of a mediæval character, which may very possibly have come from thence. Engraved glasses of very good style exist which date from the latter half of the sixteenth century.

In 1572 one Fabriano Salviati, "gentilhomme de Murane pais de Venise," came into Poitou to practise his art; and about 1588 certain glass-makers named Sarode established works at Fosse de Nantes and at Vendrennes; these last came from a place in the Marquisate of Montferrat, which in the "Acte Testimonial," printed by M. Fillon, is called Faltare; the only town to be found in the maps which resembles this in name is Falletto.

In the seventeenth and eighteenth centuries the industry declined, partly in consequence of the competition of the works established at La Rochelle and Nantes.

Some, at any rate, of the glass-makers of Poitou appear to have from an early date produced utensils of glass; and the settlement of Venetians and others skilled in the art no doubt stimulated this branch of industry, and considerable efforts appear to have been made to produce fine and ornamental wares. Several examples of enamelled glasses of very good style exist, some of which have been engraved by M. Fillon. On one of these are the arms of a family of Poitou; on a very pretty drinking glass are the words, "A bon vin ne fault point d'anseigne," i.e., "Good wine needs no bush." He also states that many vases, cups, bottles, &c. are still found entire or in fragments, both of white and coloured glass; of the latter he mentions some as opalescent, others as marbled, or spotted with a fine rose-red, blue, and sometimes green. Of the former he mentions, as a remarkable example, a *seau*, or pail, about 14½ in.

high by 14 in. in diameter, with lions' heads as handles. This is said to have been made in the neighbourhood of Parthenay.

There were also glass-houses in Provence as early as the thirteenth century, and these in the sixteenth appear to have attained considerable skill. The curious drinking glass, No. 824 of the catalogue of the Slade Collection, may with much probability be attributed to some Provençal manufacturer, as the inscriptions show that it was made for one Jehan Boucau, and a family of the name of Boucault existed in Provence. It is of yellowish glass, and enamelled in colours; the costumes of the figures on it indicate the earlier part of the sixteenth century.

In 1338, Humbert, Dauphin of Viennois, granted to a glass-maker, named Guionet, a portion of the Forest of Chamborant to establish there glass works, on condition that he should furnish the Dauphin annually a considerable quantity of glass wares amounting in all to no less than 3,151 pieces.¹

Glass was evidently more in use for articles of common and daily use in France than in England, and was made at a low price in the fourteenth century, for in a charter of the year 1309 (*Hist. Dalph.*, t. i., p. 97) it is granted that a glass-maker, exposing his wares for sale, should give one glass, or, if he preferred it, pay a denier. In the year 1338 (*Hist. Nem.* t. ii. p. 88), mention is made of the payment of seven sous (solidi) for fifteen ewers (amfori).

¹ Le Grand d'Aussy, *Histoire de la vie privée des Français*. Paris, 1815. T. iii., p. 221; who gives the following account: "Cent douzaines de
" verres en forme de cloche; douze
" douzaines de petits verres évasés;
" vingt douzaines de hanaps ou coupes
" à pied; douze d'amphores; trente-
" six d'urinals; douze de grandes
" écuelles; six de plats; six de plats

" sans bord; douze de pots; douze
" d'aiguieres; cinq de petits vaisseaux
" nommés gottelles; une de salières;
" vingt de lampes; six de chandeliers;
" une de larges tasses; une de petits
" barrils; une grande nef, et six
" grandes bottes pour transporter du
" vin." The charter is printed in
Hist. Dalph., t. ii., p. 363.

A very large quantity of glass was made in Normandy, and full details upon the subject will be found in the works of M. le Vaillant de la Fieffe (*Les Verries de la Normandie*), and M. Milet (*Histoire d'un four à verre*).

The furnace, the history of which is written by M. Milet, was at Bezu le Foret, department de l'Eure, at a spot in the forest known as the Fontaine du Houx; a fragment of a roll of accounts in the Bibliothèque Nationale (Fonds Latin des Nouv. Acquis, 2,017) shows that in 1302 it was worked for account of the King, and that the expense for half a year was 90 livres 16 sols 8 deniers. The alkali was obtained from fern, the charge for collection and carriage form part of the account. The glass made is called "*grossum vitrum*," and was window glass. This furnace and others in the neighbourhood, in 1416, were worked by Robin and Lehan Guichard, "*voirryers yffus de lignée voirryers de toute ancienneté*," and passed from them to the Le Vaillant's. Pierre le Vaillant in 1490 had from Charles VIII. letters patent as "*ecurier voirrier*," confirming his "*privileges de verrerie*," which included certain rights as regards cutting wood in the royal forests. From that time down to the present century these furnaces, and one at Haye de Neufmarché, were worked by members of the Le Vaillant family or their relations. All the workers are styled "*gentilshommes*," and, as was the case in the other "*familles verrières*" in the same country, all the proprietors—members of the firm, as we should say—learnt the art, if they did not actually do ordinary work at the furnace themselves.

At what time the practice of considering the making of glass as an art which not only did not detract from nobility of birth, but perhaps even conferred it, originated in France, does not appear; but the above shows that as early as 1490 individual glass-makers obtained privileges of "*noblesse*."

M. Sauzay (p. 47) quotes Palissy to this effect: "*L'art de la verrerie est noble et ceux qui y besongnent sont nobles.*"

The real state of the case is clearly expressed by the arret of the Cour des Aides, at Paris, in 1597 (Sauzay, p. 48) : " Sans qu'à l'occasion de l'exercice et du trafic de la verrerie les verriers puissent prétendre avoir acquis le degré de noblesse ou droit d'exemption comme ainsi que les habitants des lieux puissent prétendre que les verriers fassent acte dérogeant à noblesse." In later times the glass-works were, on this account, the refuge of many of the impoverished Huguenot gentlemen ; and M. Coquerel (*Les forçats pour la Foi*, p. 529) tells us that in 1746 more than forty " gentilshommes verriers " of Conserans, in Gascony, were sent to the galleys for the crime of professing the reformed religion.

The Norman glass-works do not seem to have produced anything but window glass and common wares, such as bottles and other common utensils.

In the sixteenth century Henri II. brought into France an Italian named Thefeo Mutio, and established him at St. Germain-en-Laye.¹ In 1598 Henri IV. permitted Vincent Basson and Thomas Bartholus, " gentilshommes verriers," natives of Mantua, to establish themselves at Rouen, in order to make there " verres de cristal, verres dorés emaulx, et autres ouvrages qui se font à Venise " ² (Houdoy, p. 22). In 1603 he established manufactories at Paris and Nevers, and it is to them that M. Labarte ascribes a ewer and basin of opal glass, formerly in the d'Huyvetter collection at Ghent, with the inscription, *VIVE LA BELLE QUE MON COEUR AIME*, 1625. The ewer is now in the British Museum.

Such examples are, however, of very great rarity, but it is possible that some of the glasses supposed to be Venetian are really of French origin.

¹ Le Grand d'Aussy. T. iit., p. 222.

² Gröffe, *Beit. zur Gesch. der Gefäßbildnerei*, &c., mentions a vase and two plates, white, painted on the surface

with blue, like the fabric of Rouen, as of the seventeenth century, and as being in the collection in the Japanese palace at Dresden.

Glass was also made in Lorraine before the sixteenth century.¹

In 1664 Colbert wrote to the French ambassador at Venice requesting him to procure workmen for a glass house, but, according to M. Sauzay (*Merveilles de la Verrerie*, p. 106), the ambassador replied that if he did so he ran the risk of being thrown into the sea. In 1665 eighteen Venetian glass-makers were actually obtained, and a company was formed for the making of mirrors, which was established in the Faubourg St. Antoine, at Paris. Another mirror factory existed at Tour-la-ville, near Cherbourg, the property of Richard Lucas, Sieur de Nehou, the art, according to a tradition mentioned by M. Sauzay, having been brought there by certain young men of Strasburg, who had contrived to obtain surreptitiously a knowledge of the manner in which it was carried on at Venice. Colbert arranged the union of the two factories, and the manufacture flourished, and produced great quantities of large plates. Those of the "Galerie des Glaces," at Versailles, were, according to M. Sauzay, made under the direction of Richard Lucas, and according to M. Peligot (*Le Verre*, p. 220), must have cost 654,600 livres; the gallery was built between 1678 and 1683. The nephew of Richard Lucas, Louis Lucas, is said by M. Sauzay to have invented, in 1688 (? 1691), the process of casting glass, which made it possible to produce plates of very great size. Many writers, however, attribute the invention to Abraham Thévert, (*v. Le Verre* by M. Peligot, p. 225), who made plates 84 in. by 50 in. In 1693 the factory was transferred to St. Gobain, where the manufacture of glass is still carried on on a very great scale.

GLASS IN SPAIN.

As in the case of France, we have it on the authority of Pliny that glass was made in Spain in his time; and this state-

¹ See Beaupré *Recherches sur les verriers dans l'ancienne Lorraine*. Nancy, 1847.

ment is confirmed by numerous remains of glass furnaces which have been met with in various parts of that country. Senor Rico y Sinobas (*Del Vidrio*, p. 11) says that in the Ibero-Roman period glass was made chiefly in the valleys which run from the Pyrenees to the coast of Catalonia, near the mouth of the Ebro not far from Tortosa, also in Valencia, and Murcia, in the valleys of Olleria, Salinas, Bufot, and Rio Almanzora; some centuries later, he thinks, in Cuenca, Toledo, Avila, and Segovia. The furnaces were small, four cubits in diameter and six in height, as appears from their ruins; the pots, truncated cones, one cubit high. Thence came the objects found in tombs in Spain, which he enumerates as small jars with handles; cups; vials without foot, but with a wide neck; pateras with gold; dishes, thick and moulded salt-cellars, small amphoras, lacrimatories; rings, red, yellow, and gilded; counters and bracelets.

The manufacture, he thinks, continued to exist under the Gothic kings, and he goes on to quote a translation made in the twelfth century of the *Lapidario* of Abolais, who is believed to have written in Hebrew in the seventh century, and who says of it that it is of several colours—white, which is the noblest; red, green, “xade,” which he explains as the dark hue of obsidian, and purple. Abolico also mentions its use in windows and as a burning lens.

To this may be opposed the opinion of M. Labarte (*Hist. des Arts Industriels*, Vol. IV., p. 548), who thinks that the art did not survive the invasion of the barbarians. This opinion he grounds on the mention made of glass by Isidore of Seville (ob. 636), who says, “*Olim fiebat et in Italia et per Gallias et Hispaniam . . . vitrum purum et candidum.*” In strictness, however, this passage at most only shows that pure white glass was not then made, not that no glass at all was made.

Señor Juan F. Riaño, in the Introduction to the Catalogue of Art Objects of Spanish Production in the South Kensington

Museum, has supplied much information with regard to the later history of Spanish glass-making. He commences the modern history of the art in Spain by stating that Al Makari, the Arabian author of the Mahomedan Dynasties in Spain, copying an Arab author of the thirteenth century, Ash-Shakandi, says that "Almeria was also famous for the fabrication of all sorts of vases and utensils, whether of iron, copper, or glass."

The making of glass at Barcelona was probably of equal if not greater antiquity. "In a municipal edict of 1324 is a prohibition that the glass ovens should be inside the city." "In 1455 permission was granted to the 'vidrieros' to form a corporation under the patronage of St. Bernardino, and from this period some of the members figure as holding municipal charges." "Jeronimo Paulo, who wrote, in 1491, a description in Latin of the most remarkable things at Barcelona, says, they also send to Rome and other places many glass vessels of different sorts and kinds, which may well compete with those of Venice. Marineus Siculus, who writes at the beginning of the sixteenth century, says that the best glass made in Spain is that of Barcelona; and Gaspar Baneiros, in his Chronographia, published at Coimbra, in 1562, mentions that excellent glass was made at Barcelona, almost equal to the Venetian. From the beginning of the seventeenth century there are frequent allusions to the merit of the Barcelona glass and to the vast quantity which was exported. The author of the *Atlante Español*, in 1795, tells us that at the end of the previous century they continued to make excellent glass in imitation of the Venetian, at Barcelona. The same author states that excellent glass was made in 1780 at Mataró, Cervelló, and Almaket, all in Catalonia."

Glass was also made at Cadalso, in the province of Toledo, as early as the beginning of the sixteenth century. Marineus Siculus says, "glass was made in many towns of Castille, the

“ most important being Cadalso, which furnished the whole
“ kingdom.”

In the latter end of the seventeenth century the industry began to fall off, but was revived by Don Ant. Obando in 1692. This revival lasted until the middle of the last century.

No. 395.-’73 and others of this collection are stated by Señor Riano to be glafs of Cadalso.

In 1546, 1590, and 1660, “ vidrieros” furnished glafs vessels, chiefly lamps, to the Cathedral of Toledo, as Señor Riano has ascertained from accounts in the archives.

In 1609 there was a glafs oven at Cebreros in Segovia, where crySTALLINE glafs was made; and in 1680, at San Martin de Valdeiglesias, where Venetian glafs was imitated. The Director was Diodonet Lambot, a native of Namur. Other glafs works were at Torre de Esteban, Hambroz, in 1680, which gave the most brilliant results; and at Recuenco, in the province of Cuenca, in the beginning of the sixteenth century, and in 1722; also in the seventeenth century at Valdemaquada, in the province of Avila; in a royal schedule dated 1680, stating the prices at which things were to be sold in Madrid, glafs made at Barcelona, Valdemaquada, and Villafranca, in imitation of the Venetian, is mentioned; and the glafs of Valdemaquada, was sold for a higher price than that made at the other places. There was also an important manufactory at La Granja famous for fine chandeliers, mirrors, and engraved glafs. (Intro. to Cat. by Señor Riano, p. xxxiv.)

What we have of the products of these factories scarcely seems to support the assertion that the glafs rivalled Venetian, though several pieces in the collection formed by Señor Riano closely resemble the products of Murano. One reason of the success of so many factories making glafs of the same character as Venetian, and of the failures in England, (as will be seen hereafter), was no doubt that the Spanish, in the interior of a country

ill provided with means for the transport of such an article as glass, had not to sustain so severe a competition as the English factories.

Spain is not a country very productive of fuel, and doubtless when the glass-houses had burnt up the wood in their neighbourhood the manufacture ceased to be profitable. It would seem that, except near the coast, the glass must have been made with potash, obtained from the lees of wine or from burnt wood, the transport of soda either from Egypt, or from the coast on which it could be produced from seaweed, would have been extremely costly. At Barcelona and other places on or near the coast soda may, of course, have been used.

Señor Rico y Sinobas has given a very extensive list of painters on glass in Spain, the names of great numbers of whom have been preserved in the archives of the cathedrals. He states (p. 20) that glass for these purposes was, if not made, certainly painted in the immediate neighbourhood, in the cloister, in fact, of the great churches, instancing particularly Toledo.

The collection of Spanish glass in this Museum, of an earlier date than the nineteenth century, has been entirely formed by Señor Riano, and the attributions of dates and places of manufacture are altogether due to him; the articles of quite recent make prove that in some factories the old forms and the old system of ornamentation are still in use. The collection is interesting as preserving a great number of examples of the rude and strange vessels in common use. Spain is a very unchanging country, and many of these may be copies of those in use at a very remote period. The singular drinking vessels, such as Nos. 179-'73, 152.-'73, and others, recall the cup of the cobbler of Beneventum, with its four lips, which Juvenal mentions (Sat. V. v. 46.; see p. xlvi).

Elegance of form or make is not often to be found; those attributed to Cadalso, which are sometimes thin and well made,

and simply ornamented with bands and lines of white enamel, perhaps exhibit more of that quality than any others. Of this the jar or ewer, 1004-'73 is a good example.

Some of the examples, as No. 135-73, and others resemble objects of Venetian make so closely, that doubts have been entertained as to their real origin; others again, as some of those attributed to San Ildefonso in the eighteenth century, bear very close resemblance to the bottles met with in old liqueur cases, which are believed to be of Dutch origin.

GLASS IN THE LOW COUNTRIES.

Little would seem to have been as yet discovered as regards the early history of glass-making in the Low Countries; perhaps the earliest mention which we have is that in an inventory of Charles V. of France, in 1379. "Ung gobelet et une "aiguière de voirre blant de Flandre garni d'argent;" but, as M. Laborde (*Notice des Emaux du Louvre*, Glossaire, p. 545) has pointed out, "de Flandre" may merely mean glass brought from Venice to the Flemish ports; for Philip Duke of Burgundy, in 1394, orders a payment of four francs, "pour seize "voirres et une escuelle de voirre des voirres que les galères de "Venice ont avant apportez en nostre pays de Flandres."

M. Houdoy (*Les verreries à la façon de Venise*, &c. p. 3) has, however, brought forward undeniable proof of the existence of the art at Lille. From the accounts of Philip the Good, Duke of Burgundy, in 1453-1454, payments were made to Gosluin de Vieuglise maître voirrier of Lille, for a fountain of glass and for four plateaux.

In the possession of the writer is a cup and cover of glass of a very fine green, bought at Amsterdam, which is of thoroughly fifteenth century character, and may very possibly have been made somewhere in the Low Countries. It is thicker than

Venetian glasses of even the earliest period usually are, and not quite like any that are really known to be of Venetian origin.

In 1509, "ung hault vere de crystal d'Anvers" is mentioned in an inventory (Houdoy, p. 34); and in 1523 (p. 14), in the inventory of Margaret of Austria, mention is made of "ung grant voire vert donné par M.S. (Monseigneur, *i.e.*, the "bishop) de Liège le couvercle et le pied d'argent doré." In 1563 Guicciardini, in his description of the Netherlands, mentions glass as among the chief articles of export from Antwerp to England.

In 1599 (Houdoy, p. 7) Philippe de Gridolphi had from the Archduchess of Austria a continuation of the privilege granted to Ambrozio de Mongarda to make "voirres de "cristal à la façon de Venice;" but an exemption was made in favour of the Comte de Lallaing so far as the making "plats voirres à faire miroirs." M. Houdoy suggests that this was the establishment referred to in 1507 by the two Muraneses as possessing the secret of making mirrors. The secret, probably, was the use of amalgam in the place of the imperfect system of attaching a leaf of lead, which was in use in Italy (*v. ante* p. xcvi) in the middle of the fifteenth century.

In the account of the conferences at Calais, in 1520, between Henry VIII., the Emperor Charles V., and Francis I. of France, sent to the Venetian Senate (Col. State Papers Ven.), it is stated that the ceiling of the temporary theatre erected at Calais was decorated with gold stars and planets of looking-glass.

In 1600 Gridolphi procured an extension of his patent, and the importation of voirres contrefaits à la façon de Venise was prohibited; but "voirres simples et ordinaires de Böhème Allemagne, France et Lorraine," were admitted.

Gridolphi's glass house, which was established at Antwerp, was, M. Houdoy infers, intended to make fine glasses only. In 1607 (p. 13) he and others complain that the merchants,

instead of bringing their glass from Venice, did so from places nearer at hand, where the said glasses of Venice were so well imitated that it would be only with great difficulty that the masters themselves could perceive the difference. Glass works at Liège and at Mezières are mentioned in this memorial. About the same time two Frenchmen were arrested and imprisoned for bringing 1,400 or 1,500 crystal glasses from Dauphiny, on their way to Calais.

In 1623 (p. 19) Captain Anthony Miotti (the name is noticeable as that of a well-known family of Muranese glass-makers) addressed a petition to Philip IV. of Spain, setting forth that the Low Countries paid 80,000 florins annually for glass from Venice; that almost all the capitals of Europe were "decorées" with such manufactories; that Venice had four (?), Rome two, Florence one; and that Milan, Verona, and London had tried to establish such. He proposed to make glasses, vases, and cups of various forms, of fine crystal of all colours, as well as at Venice, of the same materials, and to sell his wares at one third less than the Venetian glasses. The privilege was granted, and one Van Lemens joined him in the undertaking. The crystal glasses were not to exceed 25 florins per 100 in price, the "cristallin" 15 florins.

In 1642 John Savonetti, "gentilhomme de Murano," obtained a patent for glass-making at Brussels, with absolute prohibition of all import of glass. He states in his memorial that he had been banished and his goods confiscated for having brought glass-making to the Low Countries.

From some of the glass houses established in the end of the sixteenth or beginning of the seventeenth century came those glasses, often of very elegant form, which are preserved in collections, and are depicted in the paintings of Jan Steen, Mieris, Terburg, and other painters of the time. M. Houdoy notices a few remarkable specimens, which he thinks may be safely ascribed to the glass houses of Flanders or Brabant; one

of these, in the museum at Audenarde, bears the date of 1602. On the one side a stalk of lily of the valley is enamelled, on the other a young gentleman in a rich pourpoint, with a lady on his lap. Another, in the Musée de la Porte de Hal, is of Venetian form, but with the arms of the city of Antwerp upon it. He also mentions an example of the "*verres au moulin*," long glasses, the lower end of which is fixed in a mounting of silver, on which is a windmill of silver, which the drinker is bound to set in motion by his breath after he has tossed off the contents of the glass. The example he specially mentions is engraved near its upper end, and below this is encircled by a thread of blue glass between two of white; from this triple ring blue and white threads descend to the lower extremity.

GLASS IN GERMANY.

The quantity, variety, and peculiarity of the glass vessels which have been found in the neighbourhood of Cologne, of Treves, and other places in Germany not very distant from the Rhine, has led to the supposition that glass-making flourished in those provinces during the Roman occupation of them. Whether it was continued from the time that this had terminated does not seem to be clear. Many drinking vessels of glass, very similar to those found in the graves of the Saxons in England, and in France, have been found in graves in Germany; but whether they were made in all three countries by kindred tribes, or were the produce of one, and, if so, of which country, are questions yet unsolved.

Some examples of German drinking cups of this date are engraved in Wright's "*The Celt, the Roman, and the Saxon*," p. 425-426. The practice of using drinking cups of glass would seem to have been continued in Germany, for in the metrical life of Eigilis (ob. 822), Abbot of Fulda, written by his disciple Candidus (A.A.SS. Ord. Bened, Sæc. IV. Pt. i.), this passage occurs in the description of the preparation for a

banquet in the monastery: " . . . alii normaue inclita vitro
" ordine composito miscebant pocula Bacchi."

So in the life of S. Odilo (ob. 1049), he is mentioned as pouring wine into a little glass (accepto confectim parvo holovitreo infudit merum). All these were very possibly articles of home manufacture; others of more precious workmanship were either brought from the East, as the "vas pretiosissimum vitreum Alexandrini generis," at the court of the Emperor Henry, already mentioned in the section on Glass of the East; or as the sculptured glass vessels ("vitrea vascula analoglypho opere formata"), which are mentioned in the life of the same saint (AA.SS. Ord. Bened. Sæc. VI., Pt. i., lib. 2, cap. xviii.) as having been buried in the snow; these came probably from Constantinople, like the cup of St. Adalbert at Cracow, or may have been relics of Roman art.

The earliest mention in any document of glass-making in Germany which has as yet been brought forward would seem to be that which occurs in a letter addressed about the year 758 to Lullo, Bishop of Mainz, by Cuthbert (? Huætbart), abbot (? of Jarrow); it is as follows: "If there be any man in your diocese who can make vessels of glass well, pray send him to me; or if by chance he is beyond your bounds, in the power of some other person outside your diocese, I beg your fraternity that you will persuade him to come to us, for we are ignorant and helpless in that art; and if it should happen that any one of the glass-makers through your diligence is permitted (D.V.) to come to us, I will, while my life lasts, entertain him with benign kindness."¹

¹ Ep. Bonifacii, Ed. Giles, Ep. CXIV., "Si aliquis homo in tua sit parochia qui vitrea vasa bene possit facere . . . mihi mittere digneris, aut si fortasse ultra fines est in potestate cujusdam alterius sine tua parochia, rogo ut Fraternitas tua illi suadeat

" ut ad nos usque perveniat, quia ejusdem artis ignoti et inopes sumus, et si hoc fortasse contingit ut aliquis de vitri factoribus cum tua diligentia, Deo volente, ad nos usque venire permittatur, cum benigna mansuetudine vita comite illum suscipio."

Window glass was also made in Germany from a very early period.

Merlo (*Kunst and Künstler in Köln*, p. 563), gives lists of artisans in Cologne, obtained from the ancient registers of that city; among these occur the names of Albertus and Otto, at the dates 1160-1170, with the addition "Ustor," and the author suggests that these may have been makers of glass. In 1335 is found one "Henricus factor vitrorum (al. Mag. Henricus "vitriator.")"

The earliest instance of coloured windows which has been recorded appears to be that of windows given to the Abbey of Tegernsee, in Bavaria, by a Count Arnold, in 999;¹ but it is probable that nothing older than the twelfth century now exists.

Obviously wherever window glass was made there was a possibility that vessels might be made; but little or nothing has yet been made known as to the progress of the art in Germany during the Middle Ages; and specimens, if they do exist, are very rare. Herr Gröffe mentions, as in the twentieth room of the collection of Porcelain, &c. in the Japanese Palace at Dresden, a green "Weinhahn" (a tap for a wine barrel?) in form of a stag, with the date 1420.

No considerable quantity of vessels, which are certainly of German origin, are, however, to be found which probably are of an earlier date than the sixteenth century. At that period the German glass-makers produced a great number of vessels of distinct and peculiar character; the earliest of these are the cylindrical drinking vessels, generally called *wiederkoms*, such as Nos. 469.-'73 *et seq.* These are sometimes very large, some being as much as 20 in. in height. The glass has generally a greenish cast, and they are ornamented with paintings, in enamel, of no

¹ M. A. Geffert, *Gesch. der Glasmalerei*, Stuttgart, 1839, p. 66.

great merit, as M. Labarte remarks, but with a stamp of originality. The designs most commonly met with are the Emperor and Electors of Germany, or the Imperial Eagle, bearing on its wings the arms of the states which composed the Empire, or the arms of those for whom they were made. The oldest date which has been met with is that of 1553,¹ on a specimen in the Künstkammer at Berlin; but the manufacture continued until about 1725, and a great many imitations are made in the present day.

From the woodcuts which illustrate the chapter on Glass-making in the edition of George Agricola *De Re Metallica*, printed at Basle in 1561, we may gather some idea of the products of a German glass house at this time; *wiederkoms* are to be seen ornamented like No. 243.-'72 in this collection, with small projections, bottles with big bellies and slender necks, and retorts. All the operations of a glass house are represented in these woodcuts, and much information given as to the processes in use. The author does not suggest that any fine glass wares were then made in Germany, but refers to the furnaces of Murano as the sources of "*opera multa praeclara et admiranda.*"

Towards the middle of the seventeenth century paintings of much greater artistic merit were executed on goblets and *wiederkoms*; these are most frequently painted in *grisaille*, and often represent processions, battles, or like subjects. M. Labarte mentions specimens in the Künstkammer at Berlin, signed by Johann Schapper, of Nuremberg,² with dates of 1661, 1665, and 1666; by H. Benchert, 1677; and Johann Keyll, 1675. Nos. 244.-'72 and others are specimens of this style of decoration.

¹ Labarte, p. 358.

² Born at Harburg on the Elbe; he died February 3rd, 1670. See Doppelmayr, *Nürnbergische Künstler*, p. 233.

By 1600, as has been shown above (*v.* Glafs in Flanders), glafs was extensively made in Bohemia and other parts of Germany.

From the beginning of the* feventeenth century fome of the Bohemian glafs manufacturers had fucceeded in producing very pure cryftal glafs, well adapted to receive engraving. Cafper Lehmann, who was in the fervice of the Emperor Rudolph II., received from that fovereign, about 1609,¹ the title of lapidary and glafs-cutter to the court, and worked at Prague. He had there an affiftant, Zecharias Belzer; and a fcholar, George Schwanhard, who obtained from the Emperor a continuation of Lehmann's patent. Schwanhard worked afterwards at Nuremberg and Ratifbon, and died in 1667, leaving two fons, George, who died in 1676, and Henry, who furvived him for a good many years, dying in 1696. Thefe appear to have worked both with the lapidary's wheel, producing engravings in incavo, and with the diamond point, producing etchings.² M. Jacquemart (*Hift. du Mobilier*, p. 588), credits Johann Schapper (or Schaper), named above, with extraordinary talent as an engraver on glafs, afferting that he produced fubjects and arabefques of fuch delicacy of execution, that at firft fight they feemed merely like a cloud on the glafs. Henry Schwanhard is believed to have difcovered the method of etching on glafs by the help of fluoric acid, about the year 1670. He generally employed it to eat away the ground, leaving the figures with their original furface, which, being fmooth and clear, contrafted with the dull ground.³

Hermann Schwinger was alfo renowned as a glafs engraver at Nuremberg; he was born in 1640, and died in 1683.⁴ One

¹ Beckman's *History of Inventions*, vol. iii. p. 209; Doppelmayr, *Nürnbergische Kunftler*, p. 231.

² Three of their fifters, Sophia,

Maria, and Sufanna, likewife practifed the art of engraving on glafs.

³ Doppelmayr, p. 250.

⁴ *Ibid.*, p. 237.

of his productions is in the Slade collection, No. 883 in the catalogue.

Some of the engravings show very good drawing and much skill in execution. Dr. Pococke, who travelled in Germany in 1736, says that some of the large drinking glasses made at Rispen, to which the Potsdam glass works had been removed, were so finely cut as to sell for from 100*l.* to 150*l.*, and that the glass was the best in the world.¹ The Bohemian glass, he says, was thick and strong, and almost as good as the English. It was ground into figures at Breslau, and he saw a glass the cutting of which cost 20*l.* Such ornamentation became fashionable and popular, and the art was practised in Holland, and probably also in France and in England.

One of the most remarkable productions of the German glass houses is the beautiful ruby glass, which, though it had been already produced both by Romans and Venetians,² was brought to perfection by Kunckel,³ about 1679, when he was director of the glass houses at Potsdam; the finest colour, it is believed, he obtained from gold, though he affirmed that he could give glass a perfect ruby red without the use of that metal. It is now well known that a beautiful ruby can be obtained by the use of copper, but the manipulation is difficult, and the result somewhat uncertain, a little more or less exposure to heat producing very different tints.

Of the manufactory of glass in Holland little seems to be known. Dr. Christopher Merret, who translated and anno-

¹ Pococke's *Travels*, vol. ii. p. 231. Nos. 884 and 885 of the Slade Collection catalogue, may not improbably have been made at Rispen.

² Beckman, vol. i. pp. 203, 207.

³ John Kunckel was born at Rendsberg, in Holstein, in 1630; he became chemist to the Duke of Lauenberg; then to the Elector of Saxony. In

1679 he went to the Elector of Brandenburg to superintend his glass works. On the Elector's death he returned to his own estate; but in 1693 he entered the service of Charles XI., King of Sweden, who created him Baron of Loewenstern. He died at Stockholm in 1702.

tated Neri's Treatise on Glass,¹ in 1662, gives there a description of the glass furnaces of the time; and in the Latin translation of his work, published at Amsterdam in 1668, is given an engraving of a Dutch furnace, and the tools there employed.

Etching on glass seems to have been practised with considerable success in Holland, as shown by specimens in the Slade collection (Nos. 887, 889); and also engraving on glass, though at a somewhat later date (*see* No. 899).

GLASS IN THE BRITISH ISLANDS.

A passage in Strabo (Lib. IV. c. 5), in which *ύαλᾶ σκεύη* (glass wares) are mentioned in connexion with the trade with Britain, has been held to mean that such were exported from it; the passage is somewhat ambiguous, but the real meaning would seem to be that they were imported.

Some observations, however, by Professor Buckman (Arch. Journal, vol. viii., p. 352), on the analysis of beads found in tumuli, are worth notice. A blue bead found in Wilts proved to be coloured by copper and to contain no lead, whereas he says that Roman beads of "light bluish-green colour" contained lead. The real date of beads is so very uncertain that these observations, perhaps, do not prove much; but the subject seems to deserve further investigation. Some of the beads found in tombs in England (*e.g.* some in the museum at Whitby) are of exceedingly rough and careless make, and it seems not improbable that such may be of native origin.

Though it is very probable that glass was made in England by the Romans, it does not seem as yet to be quite certain

¹ Neri's *Arte Vetraria* was published in Florence in 1612; translated into English and added to by Merret, London, 1662; this last was then translated into Latin with further additions, Amsterdam, 1668; next translated

into German and further added to by Kunkel, Frankfort, 1678 (?); Nuremberg, 1743, &c.; and the whole translated into French by d'Holbach, who added several other treatises, Paris, 1752.

that such was the fact. Many fragments of ornamental glass have been found in England, particularly in London; and in the British Museum is a very curious collection of such, formed by Mr. Charles Roach Smith. They, however, in most cases are so precisely similar to those found at Rome as to lead to the supposition that they were imported. The glass vessels found in tombs of the Roman period in England are usually greenish in hue, but blue vessels are not very uncommon. Window glass has been found in considerable quantities in the ruins of villas and towns. It is perhaps probable that only the commoner glass was made in the country, and the finer articles imported.

Some remains of a glass furnace were excavated in the year 1860 at Buckholt, near the Roman road from Winchester to Salisbury, which, if they were of the Roman period, would prove that coloured and ornamental glass was then fabricated in England. Mr. A. W. Raper wrote in the "Queenwood Observer" (vol. viii.) an account of them, from which the following is epitomized: "The furnace was of brick, about nine feet
" in diameter, with four spurs of brick and flint, about ten feet
" long; the bricks were cubic lumps of clay, about one foot
" each way. Many pieces of pots were found half to one inch
" thick, glazed on both sides, one or two were fluted, one
" crossed with rude lines of a diamond pattern. Lumps of glass
" nearly as large as an egg, scores of drops of glass, and many
" pieces looking like the neck of a bottle split vertically, were
" found. Also two or three tops of vases like the mouth of a
" trumpet, with a peculiar hollow rim of the same kind, all of
" impure green glass; handles of various shapes, one of a very
" elegant, decidedly classical shape, and of a beautiful purple
" colour; many pieces of flat window glass, very impure; a
" kind of handle of green glass, with stripes of white glass
" incrustured therein longitudinally, the whole twisted like a cord;
" also pieces of green glass with ornamental white spots inlaid;

“ also a piece of flat glass with a scarlet pattern, as it were,
“ printed on it, something like a floorcloth pattern. Some
“ of the glass was of a beautiful Prussian blue, some was
“ purple, the greater part green, and a very few specimens
“ were quite pure and white.”

It was also the subject of a communication from the Rev. E. Kell in 1861 (*Journal of the British Arch. Assoc.*, vol. xvii., p. 55), and Mr. Syer Cuming made some remarks upon the objects exhibited; among them were a fragment of undoubted Roman pottery and some fragments of pottery of the time of Elizabeth or James I., a piece of painted glass of the fourteenth century, the base of a tumbler-like cup of the seventeenth century, many pieces of window glass, not cast but blown, one fragment showing a thick border; and many fragments of vessels which, in Mr. Cuming's opinion, were not older than mediæval times.

The specimens exhibited are said to have been bright green, with white spots on a yellowish-green surface, white stripes on a dark ground, and one piece “ with circles and spots, the crosses lines red on a black ground.” Mr. Cuming's conclusion was that the fragments were “cullet,” brought to be remelted, and that the furnace was probably not older than about 1550. The evidence seems scarcely to warrant any decisive opinion.

Mr. Wright (*The Celt, the Roman, and the Saxon*, p. 225), mentions, on the authority of Dr. Gueft, that a lapidary at Brighton in 1848 had several large lumps of glass, in colour amethyst, amber, emerald green, and deep maroon, which had been found on the shore, the largest twice the size of a man's fist. Dr. Gueft himself found pieces on the shore, and Mr. Wright thinks that these lumps were remains of “*massæ*” made at some Roman glass work in the vicinity.

In graves in Kent and elsewhere, which, no doubt, are those of the Saxon inhabitants before or soon after their conversion to Christianity, many vessels of glass are found. As has been said

before, very similar vessels are found both in France and in Germany ; but Mr. Roach Smith (*Introduction to Inventorium Sepulchrale*, p. xiv.) thinks that a greater number and more varieties have been found in England than elsewhere, and this certainly gives some ground for the supposition that they may have been made here.

The greater number of these are elongated tumblers, and really deserve the name, as their bases are either rounded or terminate in such small feet that they cannot be made to stand ; they are composed of glass without lead, and of a horn-like appearance, and are blown very thin ; occasionally they have a number of lobes attached to the exterior, giving them a very singular appearance ; often they are ornamented with threads of glass wound round them, sometimes disposed spirally or in wavy lines, whence perhaps, as Mr. Roach Smith suggests, the expression in *Beowulf* (line 995), “ hroden ealo-wæge,” twisted ale cups ; they are often of a pale straw colour. So many were found some years ago at Wodensborough in Kent that they were used in a neighbouring farm-house as beer glasses. With these glasses many strings of beads are found, good examples of which are in this collection. The patterns and colours are not unlike those found elsewhere, and indeed often resemble those made at Murano at the present day, but they appear to be in general of remarkably coarse execution.

If these glasses were really made in England the makers would seem to have known nothing of the art of making glass for windows, for in about A.D. 675, when Benedict Biscop required workmen to make glass for his monastery at Wearmouth, he procured them from France (*Hist. Abbat. Wearmouth*).

Possibly the artisans then brought over understood the art of making glass and casting it in plates for windows, but not that of blowing it and forming vessels ; for, about eighty

years later, we find an abbot of Wearmouth, or Jarrow, as has been stated in the section on Glass in Germany, applying to the Bishop of Mainz to have a maker of vessels sent to him. At what time the manufacture took root in England has yet to be ascertained.

Glass drinking vessels were used by the Welsh as well as by the Saxons, and are mentioned by the poets Llywarch Hen¹ and Aneurin,² both attributed to the sixth century. The Welsh name for glass, *wydr* or *gwydr*, is evidently derived from the Latin *vitrum*, and it is perhaps not improbable that some knowledge of its manufacture may have been retained by the Welsh after the departure of the Romans.

Mr. Hudson Turner (*Dom. Arch. of the Middle Ages*) asserts that there "is not a particle of evidence to prove that any description of glass was manufactured in this country before the fifteenth century;" but we find in the roll of the "Taxacio facta in Burgo Colcestrie," in 1295 (*Rot. Parl.* vol. i. p. 228), among the jurors, Robert le Verrer, and in that of 1300 (p. 243) Matthew le Verrer; Robert le Verrer is taxed (among other goods), in the taxation of 1300, on "billeys pret. xviii. d. vitrum pret. iii. s." Henry le Verrer is also taxed, but no mention is made of his stock in trade. These appear, from the enumeration of their property and their position as jurors, to have been among the chief inhabitants of the town, and they probably were not merely glaziers and glass-painters, but glass-makers. If not the latter, it is difficult to understand why there should have been so many glaziers in such a town as Colchester, and those not petty but principal tradesmen. Possibly the sand of the adjacent coast is of a kind suitable for glass-making; the salt marshes furnish abundance

¹ "Gwin o wydr gloyw" (Elegy upon Geraint), *i.e.* wine out of the bright glass.

² "Gwin gloew o wydyr leftri," (*Y Gododin*, v. 629), *i.e.* bright wine out of glass vessels.

of those plants whose ashes yield the necessary alkalies and potash could be obtained from fern; abundance of wood was in the vicinity. Colchester, therefore, was not at all an unlikely spot to have been selected as the seat of a manufactory of glass.

It is probable that during the Middle Ages glass was manufactured in England, as in most European countries, chiefly for use in windows. Sufficient skill to produce articles of such elegance as to fit them for the tables of the rich was probably wanting, and the somewhat rough habits of life then prevalent made vessels of wood, of leather, or of coarse pottery, more suitable to the poor.

Still, as has been shown, the idea of using glass bottles to hold drugs was a familiar one, and we find them employed to contain relics. In the *Kalendar of the Treasury of Exchequer* (vol. iii. p. 208), in the eighteenth year of Edward III., mention is made of "a glass bottle in which is contained oil of Saint Mary of Sardenaye;" among the relics of the church of Durham was some of the blood of Saint Thomas the Martyr in a glass bottle,¹ and two lamps of glass,² one called that of St. Lucia. In the *Proceedings of the Society of Antiquaries for 1871* (p. 116) is engraved a phial of glass, which appears to have contained oil of origanum, and was found in the lower part of the wall of the church of South Kilworth, Leicestershire, which dates between 1390 and 1420. A very similar one was found in the wall of the church at Lutterworth, which is of about the same date; recently a small bottle has been found in the wall of the church of Anstey, Herts, containing a fluid which, on analytical examination, appears to have been blood. It is of well-made, clear glass,

¹ "In quodam ampulla vitrea."

² "Lampas Sanctæ Lucie vitrea."

"Lampas quædam sancta vitrea."
Reliq. Eccl. Dun. Hist. Dunelm.

Script. Tres., published by Surtees Society, App. cccxxii. The list of relics seems to be of the fourteenth century.

much wasted and iridized; an engraving of it will appear in the Proceedings of the Society of Antiquaries.

Though, as has been shown in the section on Italian Glafs, the Venetian galleys brought vessels of glafs to England, such objects are but rarely mentioned in English medieval domestic inventories, and when they do occur they are generally described as mounted in gold or silver; one exception to this is, however, found in the Calendar of the Treasury of the Exchequer (vol. iii. p. 328.) in the mention of "1 verre de glafs," this is followed by another "verre de glafs" painted outside, with a cover of silver gilt and pounced, valued at 6s. 8d.; this is in the first year of Henry IV. In the 12th year of Edward III. we find in the same repository a "gourde" of glafs supported on snails; this is not valued¹ (nient prise).

Of the English manufacture of glafs at this period, but little has been ascertained. The earliest positive evidence that we have of the making of glafs in England seems to be in 1447, when John Prudde, of Westminster, in covenanting to execute the windows of the Beauchamp Chapel at Warwick, engages to use no "glasse of England;" this, however, clearly shows that English glafs was commonly made at that time, though not esteemed. In 1485 English glafs is again mentioned in conjunction with "Dutch," "Venice," and "Normandy;"² the price of the first was 1d. per quarrel, of the second 4½d., of the third, 5d., and of the fourth, 6d. per foot; so that the English, if the quarrels were of an ordinary size, was the dearest, and presumably the best.

¹ In the 45th year of Edward III., in the same inventories, is an entry not easily explained (vol. iii. p. 272), "un warre de wildchien, garnise de iii. dragons d'arg., endorre pois (? pris) xviii. iiiid." Does this mean a glafs made in some place in Flanders or

Germany, named Wäldchen (the little wood)?

² Hudson Turner's *Domestic Architecture of the Middle Ages*, p. 78. The glazier's bills are for the repair of a house called Cold Harbour, in London.

We are told by Thomas Charnock ¹ in 1557,—

“As for glaſs-makers, they be ſcant in the land,
Yet one there is, as I do underſtand,
And in Suſſex is now his habitation,
At Chiddingsfold he works of his occupation.”

And Fuller, writing in 1662, aſſerts that “coarſe glaſs-making
“was in this county (Suſſex) of great antiquity.” ² Another
notice of the manufacture of glaſs in the ſame county ſays,³
“Neither can we match the purity of the Venice glaſſes, and
“yet many green ones are blown in Suſſex, profitable to the
“makers and convenient to the uſers thereof.”

In the inventory of the property belonging to the Lady
Margaret, Duchefs of Richmond and mother of Henry VII.,
preſerved at St. John’s College, Cambridge, but one item of
glaſs occurs (p. 31), “glaſſery baſons,” probably ornamental
diſhes for fruit or confections.

Henry VIII., as has been mentioned in the ſection upon
Venetian Glaſs, had a large quantity of glaſs veſſels. Beſides
thoſe which would ſeem to have been of Venetian origin, he
had alſo “a goblett of glaſſe with a foote of golde” (Kal.
Treas. of Exchequer, vol. ii. p. 285), “a glaſſe with a cover
“garniſhed with gold (id. p. 297). In 1529 53*s.* 4*d.* were
paid for “a great glaſſe” for the ſame king, and in 1530 45*s.*
for another “glaſſe” (Privy Purſe expenſes of Henry VIII.).

It would be intereſting to know of what deſcription theſe
glaſſes were, both thoſe which were deemed worthy of gold
mountings and thoſe which coſt ſums equal to, perhaps, 20*l.* to
25*l.* of the currency of the preſent day. It is not very often
that Venetian glaſſes are found to be mounted, their thinneſs
and delicacy made them rather unſuited for ſuch purpoſes.

¹ *Breviary of Philoſophy*, cap. i.

³ *Suſſex Arch. Coll.*, vol. i. p. 11.

² Fuller’s *Worthies of Englaſd*, vol. iii. p. 242. Ed. 1840. Paper by W. H. Blaauw.

As in the same accounts looking-glasses are mentioned as such, it seems probable that those mentioned above were vessels of glass.

From this time we begin to find much greater quantities of glass-ware in inventories, as, for instance, in the inventory of the goods of Robert Earl of Leicester, at Kenilworth, in 1588 (Halliwell's Ancient Inventories). We find "Tenne glasse" dishes gilte with the cinque-foyle on the brims, eight graven dishes of glasse aboute the brim, three dozen and four dishes "glasses, two glass ewers, and twelve beare glasses, three with covers."

This increasing use of glass led to the reflection that large sums of money were annually disbursed from England for glass from abroad, and to the question whether it might not be made at home; adventurers from Venice, or the Low Countries, or France, no doubt sought their fortune by bringing before the English Government schemes for making glass of superior quality.

The earliest positive evidence of an attempt to manufacture glass of superior quality in England would seem to be the petition (Col. State Papers, Venetian, No. 648), in 1550, from eight Muranese glass-makers in London to the Council of Ten, a result, no doubt, of the regulations which that council had enacted a little earlier, and which have been mentioned in the section upon Venetian Glass. The petitioners, among whom was one Marco Terribile and a Gracioxo, *alias* Disperato, state that not being able to obtain work at Murano, they accepted no small sum of money to go to work in Flanders and England; that they were seized and imprisoned in the depths of the Tower, living on bread and water, and then taken out and kept under custody and penalty of the gibbet, in case they departed without having worked out the money received. They therefore beg to be excused from the penalties denounced against them. On the 13th June 1550 the Council of Ten

deliberated on this petition and agreed, in order to gratify the King, to allow them to remain until the end of the term for which they had engaged themselves.

Stow, in his Chronicle (p. 1040), tells us that "the first making of Venice glassies in England began at the Crotchet Priars, in London, about the beginning of the reign of Queen Elizabeth, by one Jacob Vessaline, an Italian." It is, no doubt, to this manufacture that the author of *The Present State of England*, anno 1683, Part iii. p. 94, alludes when he states that it was in 1557 that glasses (not glafs) first began to be made in England, and that the finer sort were made in Crutched Priars; and it may be that it was in this manufactory that the Muranese were engaged.

Not very long after, in 1565, we find a letter from Armigill Waude to Sir Wm. Cecil (Cal. State Papers, Dom.), of which the following is an extract:—

"The man" (Cornelius de Lannoy) "no doubt ys at great charges, he thought he might have had his provisyons in England as in other places; but that will not be. All our glasse makers can not facyon him one glasse tho' he stoode by them to teach them. So as he ys now forced to send to Andwarp and into Italia for new provisyons of glasses, his old being spent. The potters cannot make him one pot to content him. They know not howe to scasson their stuff to make the fame to susteyne the force of his great fyers. The Spanyard would make me believe that Cor" (i.e., de Lannoy) "hath finished his busyness already, the which I suppose not to be true. Marry I do perceive he hath dyverſe tymes occupied his melting furnace, and always in myne absence, he telleth me he hath made theſtars" (i.e., the trial) "of certain ewres . . . he hath the keye of thys prison for this respect I would he were putt in thys prisonall comynge of thys place so he provided for him howe in England, he liketh marvellously well the rize of Guldenes." This letter is written from "Belgys," and in it is inclosed

an account, from which it appears that 150*l.* had been paid to De Lannoy for provisions, and 30*l.* on his coming into England, and that he was to receive 30*l.* per quarter; it appears that he had not been very long at work, as his first quarter's pension only fell due on 25th March 1565.

From the letter it would appear that the undertaking was rather the ornamentation than the making of glasses, and also that no successful result had been arrived at in the first six months. De Lannoy (or Launoy) was most likely from the Netherlands. The undertaking probably failed, for we hear no more of it. In 1567 Pierre Briet and Jean Currie (or Quarre) wrote to Cecil from Windsor, desiring permission to erect glass-works similar to those of Venice. They had a recommendation from the Vidame of Chartres.

On the 9th August 1567 John Quarre and Anthony Becku, *alias* Dolin, "borne in the Low Country under the "dominion of the King of Spayne," made a formal statement of the conditions under which they proposed to make "table "glasse as is used here for glasing, brought hither out of "Burgundy, Lovayn, and France," and their conditions were agreed to. These include a prohibition against the making of such glass by others; the privilege was to continue in force for twenty years. In 1568 the same persons petitioned for leave to cut wood and make charcoal in Windsor Great Park. They made a contract with Thomas and Balthazar de Hamzel, dwelling at the glass houses of Vosges, in the country of Lorraine, to come into England, make glass there, and teach the art.¹ In 1589 George Longe petitioned for a new patent, and in his petition states that there were fifteen glass-houses in England; these he proposes to reduce to two, and to erect others in Ireland.²

¹ Lansdowne MS. No. 59, Art. 76, quoted in Hudson Turner's "Domestic Architecture."

² Lansdowne, MS. No. 59, Art. 72.

The manufacture must, however, during this century have reached a certain amount of importance, as Richard Hakluyt included in the list of articles which he proposed to be carried with the expedition for the discovery of Cathay eastward in 1580, besides Venice glasses, "Glasses of English making."¹

In 1574 the Bishop of Chichester writes to Lord Burghley that "of very late, aboute Petworth, certayne had conference " to robbe the Frenche men that make glasse, and to burne " there houses, but they be apprehended and punished."

The Frenchmen who were the intended victims were probably employed at some furnace established under Carre and Becku's patent, for Carre, in 1611, states that he has established glass houses in Suffex and in London.

In 1595 mention is made of one Adrien, an Italian, who had been for five years a glass-maker in England, in a letter from an anonymons Jesuit (Cal. State Papers, Dom.), disclosing a scheme to fire the navy by "artificial fireballs, the size of a " fist, that will fire even though in water." The glass-maker was probably brought into the scheme in order that he might furnish the vessels in which, as with the Saracens in the twelfth century, the petroleum was to be contained.

Before 1611 Sir Wm. Slingsby (Cal. State Papers, Dom.) had obtained a patent for making glass with sea coal, and in 1615 a Royal Proclamation was issued prohibiting the use of wood in glass-making, and ordering it to be made with sea coal or pit coal only; the importation of foreign glass was at the same time prohibited. In 1620 permission was granted to the patentees to import rare and curious glasses.

Sir Jerome Bowes and Sir E. Zouch obtained patents for glass-making, but after much negotiation Sir Robert Mansel acquired, about 1616, the exclusive property in the patents, and set actively to work. Many disputes ensued respect-

¹ "Hakluyt's Voyages," vol. i. p. 496, ed. 1809.

ing the quality and price of Sir R. Mansel's glafs; from the statements made by complainants and others, it appears that he made both window glafs and glafs vessels of various kinds.

Some one of these glafs houses was probably that which Strype (Stowe's History of London, Broad Street Ward) mentions in these words: "Here was a glafs house where Venice " glaffes were made and Venetians employed in the work, and " Mr. James Howel, in James the First's time, was steward to " this house." The Rev. Mr. Mayhew (*vide* Journal of the Archæological Association, 1874, p. 204; 1875, p. 107) has exhibited several objects, said to have been found recently on the site of this glafs house, afterwards that of Pinner's Hall, in Broad Street. They are described as a tall wine-glafs on ornamental foot; a square scent-bottle, a ribbed fountain inkstand, a stem of white filigree, a flower vase on a serpent stem, emerald glafs for beads, an "engraved specimen of vitro d'oro," a large calendering rubber of blue glafs and a wine-glafs with curved lip and an air bubble in the stem.

About 1620 an attempt was made to set up glafs works in Scotland, and John Maria dell' acqua, who was sent for from Venice, and worked for Mansel for two years, had the post of master of the works in Scotland offered to him.

In 1623 Sir R. Mansel states that he had erected furnaces in London, the isle of Purbeck, Milford Haven, and on the Trent, all of which had failed, but that he had established them successfully at Newcastle-on-Tyne.¹ In 1624 his patent was exempted from the operation of the Act of Parliament of that year against monopolies.

If he endeavoured to make glafs which would compete with

¹ Glafs-making perhaps was already practised there. In 1570, Bertram Anderson, alderman of that town, had ten dozen drinking glaffes. In 1577, Thomas Liddell, also of Newcastle,

fold "flacketts" (small bottles?) of stone and glafs (Durham Wills and Inventories, published by Surtees Society, p. 336, 339.)

the drinking glasses of Venice, he does not seem to have succeeded, for they continued to be imported (*vide* letter of Sir Isaac Wake, in 1625, with note of chests of glass sent from Venice to the Dukes of Buckingham and others). In 1635 a proclamation was issued setting forth that divers ill-affected persons continue to import glass, and renewing the prohibition against the so doing.

In 1634 Sir R. Mansel again addressed a statement to the Council, in which he says that he was out of pocket 30,000*l.* before the manufacture could be perfected. In his absence at Algiers his patent was declared void by the House of Commons. The late King granted a patent for fifteen years, but his workmen were drawn into Scotland, and most of the glass used here was imported from thence, and he was obliged to buy up the Scotch patent at 250*l.* per annum. After his men returned from Scotland they made such "ill-conditioned" glass that he was forced to procure a whole company from Mantua. Then, he states, his clerk ran away to France, and by his procurement the greater part of the drinking glasses sent here was brought from thence. This import was stopped by the order of Council in 1632, since when he had been at great charge in perfecting the work of looking-glass and spectacle plate-glass plates; but had not raised the price, on the contrary, had fallen his prices. He further states that his men had now again withdrawn in Scotland, and that glass is attempted to be made in Ireland.

From about this date until after the Restoration, nothing concerning Mansel's glass manufacture is to be found in the State Papers; but in 1660 several persons endeavoured to obtain a renewal of his patent; Philip Howard (son of the Earl of Berkshire), Sir C. Berkeley, Arundel, widow of John Penruddock, and others; but it would seem that it was not revived.

A most important change in the practice of glass-making was introduced in England at some period during this century,

viz., that of using large quantities of lead (with a proportion of potash) as a base; the glass so made is known to us as flint-glass, to the French as "cristal." The use of lead in glass-making was not exactly a discovery, for clear glass of the Roman period containing lead has been sometimes, though rarely, met with, and, according to Klaproth's analysis (*vide ante* p. xxiv), the opaque red glass, called "hæmatinum," contains a good deal of lead. As has been said before (p. lxxii), glass containing lead was known in the middle ages as Jewish glass. Heraclius gives a recipe for making such glass; but in it is no mention of potash, and the product would therefore be, as M. Peligot (p. 362) remarks, not flint-glass, but a silicate of lead, a very fragile substance though susceptible of being moulded or blown. An oval mass of green transparent glass, measuring 14 inches by 12 inches, was preserved in the treasury of St. Denis under the name of the "mirror of Virgil."¹ This when analysed in 1789, proved to contain about half its weight in oxide of lead (Le Verre, p. 358), whether it contained potash does not appear. It was probably of Byzantine origin like the emerald at Reichenau (*ante* p. lix).

M. Peligot after reviewing these facts, comes to the conclusion that there is no proof that the true flint-glass was known to the ancients, and that "to the English should really be attributed the honour of having created in their flint-glass a new product, which by the progress made in the quality and selection of the materials used in its fabrication, has become, without dispute, the most beautiful glassy substance which we know, and which it may be possible to produce" (p. 364).

To whom it first occurred to use this compound on a large scale, and the precise period at which its use was introduced, have not been ascertained. Merret, writing about 1665 (in his edition of the *Ars Vitruvia* of Neri), says that glass made with

¹ Virgil, in the Middle Ages, was supposed to have been a great enchanter.

lead was not in use in the English glass-houses on account of its too great fragility, a notice which proves both that it was known and that its composition or management was not thoroughly well understood; but very soon after, viz., in 1673, as will be seen below, it was in full use at Lambeth, and produced glass "as clear, ponderous, and thick as crystal."

M. Bontemps (*v. Peligot, Le Verre*, p. 346) argues with much force that flint-glass was probably first made after about 1635 (? 1615, *see ante*, p. cxxxviii), when coal was used for fuel instead of wood. The use of coal makes it necessary to employ pots closed at the top. The material to be fused is thus in some degree protected from the heat and it becomes desirable to augment the proportion of the more fusible element, viz., the alkali; but this could not be done without injury to the colour and quality of the glass, and oxide of lead was therefore added and the quantity of alkali diminished.

It seems not improbable that Sir R. Mansel's success in the manufacture of glass, at Newcastle-on-Tyne (*v. p. cxxxix*) before 1623, was due to the new system of manufacture.

Glass works were carried on in London in which the Duke of Buckingham was interested. Evelyn (*Diary*, anno. 1677) says, "We also saw the Duke of Buckingham's glass work, where they made huge vases of metal as clear, ponderous, and thick as crystal; also looking-glasses far larger and better than any that come from Venice." This glass house would seem to have been at Lambeth, as the author of "The Present State of England," Anno 1683 (Part III., p. 94), says that flint-glass plates for looking-glasses and coach windows were made about 1673 at Lambeth, by the encouragement of the Duke of Buckingham. Glass, probably for vessels, was also made at Greenwich; for in Evelyn's *Diary* (Anno 1673) is the following passage: "Thence to the Italian glass houses at Greenwich, where glass was blown of finer metal than that of Murano, at Venice."

From the Lambeth glass house came, no doubt, many of the mirrors with bevelled edges, still remaining in old houses. Probably some of the drinking glasses then made also remain, such as the "flint-glass a yard long" in which, as Evelyn records, James II.'s health was drunk at Bromley in 1685.

The revocation of the edict of Nantes in 1685 drove a great number of artisans from France, and among them several workers in glass; a great impulse was thus given to the manufacture, and in 1736, as we have seen, the English glass was considered by Dr. Pococke to be superior to that of Bohemia, and only inferior to that made in the Prussian glass-houses, under royal patronage and with unlimited outlay.

All that was produced was, however, not of equally good quality, for a French writer in 1760, M. Bosc d'Antic, criticises the English flint-glass of that period in the following terms: "Their 'cristal' is not of a good colour, it is rather yellow or brown, if the red colour of the manganese a little preponderates. It is so ill melted that the salt breaks out, it gets dirty, readily corrodes, and is full of spots and clouds." (Peligot, *Le Verre*, p. 348.)

In more recent times a manufactory of glass at Bristol acquired a certain reputation, but its products (*see* Nos. 911 to 913) are chiefly of a later date than the limit which has been fixed for this essay.

Some knowledge of the art of glass-working seems to have existed in Ireland from an early period; for small pieces of mosaic glass¹ and cameo heads² are found in brooches, croziers, and shrines of Irish origin; the examples of mosaic glass display remarkable skill, as may be seen on the crozier of Lismore, belonging to the Duke of Devonshire. It was made for a Bishop of Lismore who died in 1112, but it is, of course,

¹ In the cross of Cong, the Lismore crozier, the shrine of St. Mogue, &c.

² In the brooch called that of Tara.

possible that the glass ornaments may be of an earlier date. Another process of decoration employed was that of cutting into the surface of a piece of glass, or more probably of impressing a pattern on the glass while soft, and filling the cavity with metal or glass, or enamel of another colour. Beautiful examples of this may be seen on the chalice, dating from the ninth or tenth century, found some years ago at Ardagh, in the county of Limerick, and now in the museum of the Royal Irish Academy (v. Transactions of the R. I. A., vol. xxiv., Antiquities, Pt. IV.).

The colours and patterns used in these processes are so peculiar as to render it highly improbable that the objects referred to were made elsewhere than in Ireland. It is a very interesting question whence this art was derived; there is no indication that it was practised at the time either in England, France, or Germany; apparently, therefore, it must have been learnt at a very early date, either from Rome or from Constantinople, or even possibly from Egypt. This last origin may appear at first sight very doubtful, but it has been observed by Dr. Keller, in his remarks on the Irish MSS. at St. Gall,¹ that the style of ornament and colouring which characterises them has much analogy with that of Egyptian art; and he points out that there is direct evidence of the sojourn of Egyptian monks in Ireland in the mention in the "*Leabhar Breac*"² of seven Egyptian monks who were buried in Disert-Ulaidh.

Many glass beads have been found in Ireland; some are identical or almost so with those found elsewhere, but some are peculiar, particularly those the ornamentation of which is composed chiefly of a twist of clear and white opaque glass, much

¹ Dr. Keller's Essay originally appeared in the "*Mittheilungen der Antiquarischen Gesellschaft in Zurich*" for 1861, and has been translated by Dr. Reeves, and published in the

"*Ulster Journal of Archæology*," for July 1860.

² The original MS. is in the library of the Royal Irish Academy.

as Fig. 120, p. 163 of Sir Wm. Wilde's Catalogue of the Antiquities in the Museum of the Royal Irish Academy, where many varieties of beads found in Ireland are described and figured.

Vessels of glass were also in use in Ireland at a very early time. In the "Tripartite Life of St. Patrick" (seventh or eighth century?), (cap. xxxv. p. 134) mention is made of "a certain stone cave of wonderful workmanship, with an altar under ground, having on its four corners four chalices of glass," at Duma-Graidh, in the county of Sligo.

GLASS IN CHINA.

Various assertions have been made as regards the antiquity of glass-making in China. If the conjecture that when Pliny mentions Indian glass as the best in the world, the product in question was in reality Chinese, be well founded, the fabrication of glass in China began at a very remote period. There is no improbability that such was the case, as, though the intercourse between China and its western neighbours may not have been very active, there was some both by land and by sea, and some knowledge of the art may have found its way thither; or it may even have been independently discovered by that ingenious people, who in so many arts have shown great power of invention. Their pottery would seem to have been glazed from a very early period, and they have long practised the art of enamelling on metal; both these are arts near akin to that of glass-making. An argument in favour of its having been really of indigenous invention may be derived from the peculiarity of the objects produced, which, until very recent times, would seem to have been not clear glass for windows or for domestic utensils, but objects coloured in imitation of natural stones, and cut like them into somewhat massive forms.

The native writers, at any rate, assert its existence among them at a period anterior to the Christian era.

According to the author of the "*Remarques sur un Ecrit de M. P.*" (Paw?), &c., one of the French missionaries at Pekin (or perhaps one of their Chinese converts), who wrote about 1770, (*Mémoires concernant les Chinois*, vol. ii., pp. 463 and 477), the Emperor Ou-ti, one of the Han dynasty, which occupied the throne about 140 B.C., had a manufactory of lieou-li (a species of glass, perhaps made with alkali derived from fern, which bears the name of lieou-li-tfao, *i.e.*, the lieou-li herb); this is stated on the authority of the annals of the Han, written in the seventh century of our era. He also states that the ancient dictionary Eulph-ya speaks of lieou-li, that the Tsi-yo says that false pearls were made from it, and that a very ancient commentary on the Hiao-king asserts that mirrors were made of glass coated with some composition.

The writer also says that the words po-li were in use for glass at a very early time; and he quotes from the Chinese annals the statement that in the beginning of the third century the King of Ta-tsin¹ sent to Tai-tfou, of the Wei dynasty, very considerable presents of glasses of all colours, and some years afterwards a glass-maker, who, by means of fire, could change pebbles into crystal, and who taught the art to disciples.

The Wei dynasty reigned in Northern China, and the manufacture of glass in Shan-tung, extensively practised at the present day, perhaps owes its origin to the glass-maker of the third century. The missionary goes on to say that he could furnish many other proofs from writers of the antiquity of the art in China; but he confines himself to the mention of a vase of glass presented to the Emperor Tai-tfou (A.D. 627), which

¹The word means Great China, p. lvi.), or, according to Duhalde, for but was used by the Chinese for the India (*History of China*, English translation, vol. i. p. 361). Roman Empire (*Yule's Cathay*, vol. i.

was so large that a mule could have been put into it,¹ and was brought to the palace in a net suspended between four carriages. The manufacture of glass was, however, he thinks, never carried on extensively; the writers who mention it speaking with a kind of contemptuous pity of the false pearls, the mirrors, the celestial globes, the windows, screens, and great vases made under the Han dynasty. The ancient books, he says, stated that mirrors were made from pebbles, and a material obtained from the sea and reduced to ashes,—an evident allusion to soda prepared from sea-weed.

Glass-making, therefore, having been in China a manufacture not generally diffused over the country, but carried on in a few localities, it cannot be expected that, with our small acquaintance with the literature of the country, much should have been ascertained as to its history from the native writers; one allusion to glass, which proves that it was known to the Chinese in the fourteenth century, may be mentioned; it is from a Chinese writer of about the year 1350 (Yule's ed. of Marco Polo, vol. ii. p. 311), and occurs in an account of Ceylon: "In front of the image of Buddha is a sacred bowl, which is made neither of jade nor copper, nor iron; it is of a purple colour and glossy, and when struck it sounds like glass." This vessel was the famous *patra* or alms-pot of Buddha.

Considering how little communication took place between China and Europe until the sixteenth and seventeenth centuries, it is not surprising that but very little is to be learnt from any European writer on the subject of Chinese glass, but one mention exists which is of some importance.

In the geography of El Edrisi, written in Sicily in the year 1154, the following passage occurs in the chapter relating to

¹ According to one authority, a mule could as easily enter it as a fly could enter a pitcher. It has been of late asserted that the vase still exists in the

palace of Peking. (Shaw's *Chemistry of Pottery*, p. 503, note.) No one, however, seems to have recently seen it.

China (First Climate, tenth section, vol. i., p. 99, of the French translation) : " From Khankou to Djankou (the distance is " wanting in the MS.). This is a celebrated city " the Chinese glass is made there." Khankou is stated by the same writer to be a port on the river by which one may ascend to the greater part of the country of the Sovereign of China. It is thought that Khankou is an error for Khanfou, the Ganfu of Marco Paulo, which was the port most resorted to by the Arabs at this period, and is now represented by Hang chu south of the Yang-tse-kiang ; but Djankou has not been satisfactorily identified with any existing Chinese city.¹

M. Labarte (Description des objets d'Art de la Coll. Debruge-Dumenil) expresses an opinion that porcelain, not glass, was really what was made at Djan-kou ; but this seems to have been formed rather rashly ; the words meaning glass and porcelain differ widely, both in Chinese and in Arabic, and neither El Edrifi nor his informants would appear to have been likely to have made any confusion between the two substances, both of which must have been well known to them.

At the end of the sixteenth century we get a little light, rather negative than positive, upon the state of the glass-making in China. Father Ricci, a Jesuit missionary, who was in China about 1590-1600, narrates (Purchas' Pilgrimes, vol. iii., lib. ii., c. 5.) that he gave a prism of glass to a native convert, one Chuitaïso, who put it into a silver case with gold chains, and " adorned it further with a writing that it was a fragment " of that matter whereof the heavens consist. One was said " to offer him five hundred pieces of gold soon after for it, " which, till Father Matthew had presented his to the king, he

¹ As maps of the seventeenth century (e.g., in Werdenhagen, de Rebus Publicis Hanseaticis, and in Garzoni, Allgemeine Schauplatz) spell the province which we now call Chanfi (in

the north of China) Xiancu and Xianxq, it seems possible that Edrifi was misled, and bestowed the name of the province on some important city in it,—a mistake of not unlikely occurrence.

" would not sell ; after that he set a higher price, and sold it." From this we may infer that to the Chinese brilliant colourless glass was unknown, and in another passage (lib. ii., c. i.) Father Ricci states that the Chinese make glass, " but therein are short " of the Europeans."

Père Duhalde, in his description or history of China, first published in 1735, says that the kind of glass called *leou-li* was made at Yen-tching, near Tsi-nou-fou, the chief city of Shantung. He states that it was more brittle than that of Europe, and broke when exposed to the inclemencies of the air (English edition, vol. i. p. 220). This account is curiously different from that given about forty years later, as quoted below.

About the year 1770 we have more detailed accounts of the then state of Chinese glass-making.

The writer of the "*Remarques sur un écrit de M. P.*," already quoted, says that the Emperors of the reigning dynasty paid so little attention to the manufacture that they had not thought it worth while to place learners with the European glass-makers who had been sent out, or even to have them brought from Canton, where were a good number. He further informs us that in his time there was a glass house at Peking where every year a good number of vases were made, some requiring great labour, because nothing was blown ;¹ but he adds that the manufactory was only an appendage to the Imperial magnificence, and so regarded. He concludes the subject with the reflexion that the Chinese would be better clothed, lodged, and fed, if glass were more common in China,—a remark which, though true as regards lodging, does not seem equally so as regards either clothing or feeding. The same writer (p. 463) gives a curious account of the *lieou-li* as made in his time : it was, he

¹ "Différentes pièces d'un grand travail, parceque rien n'est soufflé," meaning, probably, that their orna-

mentation was made by cutting, not by a process of blowing and moulding, as in the case of Venetian glass.

says, so thin as to be elastic, and all sorts of toys for children were made of it, also trumpets and grapes, which last were so like natural grapes as to deceive the eyes; these objects were extremely cheap.

This statement, that glass was made so thin as to be elastic, may seem so remote from probability as to throw a doubt on its correctness, and to lead to the supposition that the writer confounded glass with some other substance; it is, however, only sufficient to read his observations to be convinced that he was fully aware of the character and composition of glass, and very unlikely to have made any such mistake. Possibly the Chinese may have a knowledge of some process by which the elasticity of glass can be very greatly increased.

In another memoir in the same collection, written in 1774 (vol. viii. p. 267), on the articles which might be imported with advantage into China, vessels of glass are mentioned, but with the proviso that they should be coloured and wrought (*travaillés*). Little bottles for holding snuff are mentioned as being made in China, and the French glass-makers are advised to imitate Chinese forms if they desired to find a good sale for their wares.

Very little has been told by modern travellers as to the manufacture of glass in China; but the Rev. A. Williamson (*Journeys in North China*, vol. i. p. 131) gives the following interesting account of it in the province of Shan-tung: "Long ago it was discovered that the rocks in the neighbourhood of Po-shan-hien, when pulverized and fused with the nitrate of potash, formed glass, and for many years the natives have applied themselves to its manufacture; I found them making excellent window-glass, blowing bottles of various sizes, moulding cups of every description, and making lanterns, beads, and ornaments in endless variety. They also run it into rods about 30 in. long, which they tie up in bundles and export to all parts of the country. The rods of pig

“ glafs cost 100 cash per catty at the manufactory. The glafs
“ is extremely pure, they colour it moft beautifully, and
“ have obtained confiderable dexterity in manipulation; many
“ of the articles are finely finished.”

Po-shan is fituated at the foot of a range of mountains, and the “ rocks ” which Mr. Williamfon mentions are probably quartz; other parts of the province, as the neighbourhoods of Yung-ching and Tfi-mi, he fays, yields abundance of rock crystal of various colours.

It appears clear that, at any rate up to the end of the laft century, the manufacture of glafs in China was not conducted in order to produce articles of general utility, but rather to gratify that tafte for rarities which is fo ftrong among the Chinefe. The cafe was the converfe of that of the Romans, thefe laft had no fine pottery, and therefore employed glafs as the material for veffels of an ornamental kind for table fervice and like purpofes; the Chinefe, on the contrary, having from an early period had excellent porcelain, have been carelefs about the manufacture of glafs.

Examples of Chinefe glafs of an early date—if they ever reached Europe—have never as yet been identified as fuch;¹ but one would appear to exift in Japan; the following account of it is extracted from the *Athenæum* of the 7th Auguft 1875:—

“ We extract the following from a letter, dated Yokohama, 25th of May: ‘ At Nara, an old capital of the Mikados, ‘ where seven of the defcendants of the Sun reigned in the eighth ‘ century, is an immense wooden barn, built by one of the kings, ‘ and where he placed all the treasures of his palace previous to ‘ the removal of the Government to Kiyoto, where it has ‘ been ever fince. This barn has been carefully repaired

¹ Two bottles or vafes, faid to be of a very early date, and to have been long preferved in the Imperial family, have been lately given by Prince Kung to the Chev. v. Schäffer, the Austrian Minifter in China and Japan.

‘ every sixty or sixty-one years, and is now entire and found.
‘ The treasures have been from time to time inspected, and
‘ some few additions have been made to those which are found
‘ in the original catalogue. I observed a ewer of white glass,
‘ about a foot high, which looked more modern than the
‘ eighth century. We were assured, however, by an antiquary
‘ who is engaged in describing the collection, that this ewer is
‘ one of the objects entered in the original list or catalogue
‘ which was deposited from the first.’ ”

The same object, it would seem, is somewhat differently described by a writer in the *Pall Mall Gazette* of the 7th of August 1875 ; he writes of it as “ a handsome glass vase with a “ coloured glass cover.”

No one has as yet noticed the existence of any glass-making in Japan, and it is obviously more probable that this vase was a present from China than an object of indigenous manufacture, if it be really of the period to which it is assigned.

Important specimens of more modern date are not very common in Europe ; vases of a semi-opaque yellow glass are perhaps those most frequently seen, and some fine examples were in the International Exhibition of 1867 in Paris, one of which bearing the name of the Emperor Kien-lung, 1736 to 1796, the produce, no doubt, of the glass-house mentioned by the writer in the *Mémoires* is in this Collection, No. 653.-’69. Vases nearly 2 ft. high have been noticed in China, and one seen at Peking, had the imitation of a crack and rivets all executed in the glass. The glass objects from China, which are more common in this country, are small bottles to contain snuff ; they are sometimes blue or red, with a coating of white, carved into landscapes or figures, and are often imitations of chalcedony, agate, and other stones ; these imitations are executed with considerable skill and success.

Chinese glass deserves attentive examination, particularly from those who are interested in the manufacture of glass, for

the colours are in many instances singularly fine and harmonious, and a good collection would probably be of great use in an industrial point of view. The coloured glasses, instead of being of one shade of bright colour throughout, are usually semi-transparent and marbled, like natural stones. Almost every conceivable mode of decoration of glass except this has been tried in Europe in modern time, but this scarcely at all, and there is evidently a large field open in this direction for the taste and skill of the glass-maker. One notable exception to the remark is the faucet, of rich crimson, flecked with a dark colour, No. 1000-'69, made at St. Petersburg, and bought in the last Universal Exhibition at Paris, which has been supposed to be a natural stone. It was, perhaps, made in imitation of rhodonite, the rose-coloured felspar, found in Siberia, but is richer and finer in colour than the native mineral. Glass in cakes is imported from China into India for the use of the enamellers, as has been already stated.

ADDENDA ET CORRIGENDA.

Page i. Chemists have adopted a practice of defining glass as a colloidal or non-crystalline form of matter without regarding the chemical composition, thus they include such substances as glass of antimony and even jelly and barley-sugar, and ought apparently to include flint and many other minerals, but it would seem more correct to confine the word to compounds of silica and alkalis, with or without other metallic oxides, fused together and thus brought into a non-crystalline condition. Such at least is the sense in which the word is generally used.

Glass if slowly cooled or reheated and kept long at a high temperature below the fusing point passes from the vitreous to the crystalline state, and is then said to be devitrified (Percy's Metallurgy, p. 47). It is therefore sometimes defined as an amorphous silicate.

Page i, line 22. Since the passage in which the benefits of the invention of glass are set forth was printed, the writer has found that Dr. Johnson has far better expressed almost the same ideas, and regrets that he made the discovery too late to be able to substitute the one passage for the other. Dr. Johnson expresses himself thus when considering from what unpromising beginnings the most useful productions of art have arisen, "Who," he says, "when he first saw the sand and ashes by casual intenseness of heat melted into a metalline form, rugged with excrescences and clouded with impurities, would have imagined that in this shapeless lump lay concealed so many conveniences of life as would in time constitute a great part of the happiness of the world? Yet by some such fortuitous liquefaction was mankind taught to procure a body at once in a high degree solid and transparent, which might admit the light of the sun and exclude the violence of the wind, which might extend the sight of the philosopher to new ranges of existence and charm him at one time with the unbounded extent of the material creation, and at another with the endless subordination of animal life, and, what is yet of more importance, might supply the decay of nature and succour old age with subsidiary sight. Thus was the first artificer of glass employed, though without his own knowledge or expectation. He was facilitating and prolonging the enjoyments of light, enlarging the avenues of science, and conferring the highest and most lasting pleasures; he was enabling the student to contemplate nature, and the beauty to behold herself." (The Rambler, No. 9.)

Page v. Something should perhaps have been said on the subject of the iridisation of glass when the means of producing colour in that substance were treated of. Few persons can have failed to observe the wonderful beauty of the tints occasionally seen in ancient examples of glass which have been subjected to a process of decay, certainly no other product of human art ever exhibits such brilliancy and vividness of colour: in natural objects alone beauty of like kind can be found. The cause of this beautiful effect is the separation of the surface of the glass into extremely thin films, which refract and decompose the rays of light; that such is the case may be shown by dipping such a piece of glass into water, this saturates the films and unites them temporarily into one transparent mass with the central undecayed portion, the colours then disappear, to appear again as soon as the water evaporates and the films again become separated by intervening air. It will be found that coloured glass, and perhaps specially green and blue transparent glass, produce finer colours when iridescent than ordinary uncoloured glass.

The iridescence of the glass vessels which are now so conspicuous in the shop windows is said to be obtained by the exposure of the object to the action of a much diluted acid at a regulated temperature in a closed vessel. It may be surmised that the effect of this proceeding would be to produce on the surface of the object extremely minute indentations, which would reflect and

decompose light, and iridescence would thus be produced in the same manner as it is on mother-of-pearl, in which last case it is due to the presence of a great number of extremely minute channels with bright polished sides which furrow the surface.

In both these cases it is possible that extremely thin translucent films exist, and that light is therefore both refracted and reflected.

Page iii, line 29, for "lachymatory" read "lachrymatory."

" v, ,, 22, omit "die."

Page viii, line 27. The writer has in his possession a lump of impure glass formed by the burning of a stack of wheat in Lincolnshire.

Page ix, line 9. Sir H. Rawlinson (Herodotus, vol. ii, p. 82) states that ruins of glass furnaces may be still seen at the natron lakes in Egypt.

" x, ,, 3, for "Neno" read "Juno."

" x, ,, 7, for "Königbuck" read "Königbuch."

" xi, ,, 10. The Emperor Hadrian at the same time sent to the Consul a present of two cups given to him by an Egyptian priest, which he describes as "alassontes (ἀλασσοντες) verficolores." It has been supposed that these cups were of glass, and that they may have resembled the cup belonging to Baron Lionel de Rothschild (v. page xxxiii). The Emperor's letter will be found in Vopiscus, Vit. Saturn, c. 8.

Page xiv, line 9. Among the beads found in Great Britain are some of remarkable size and beauty; such have sometimes been the objects of a superstitious veneration, and in Wales and Ireland they have been called Glain Neidr (adder's egg). Gleini na Droedh (Druid's beads), serpent stones, &c. Some antiquaries have considered them to be the representatives of the "ovum anguinum," the origin of which, viz., from the saliva of a number of congregated snakes, is told in much the same manner by Pliny and in the popular legends of Wales, Scotland, and Ireland. It is, however, obviously improbable that these ideas as to the origin and mythical virtues of these beads can be of a date as early as that when they were articles of commerce, it is more probable that they have grown up at a time when the real origin of the objects was unknown and when like the aggrs beads in Africa; they were only occasionally found in the earth.

Page xvi, line 1, for "object" read "objects."

" " 7. In the British Museum are many pieces of glass found at Ialysos in Rhodes, they are chiefly disks, varying in size from that of a sixpence to that of a florin, and oblong plates about $1\frac{1}{4}$ inch long by $\frac{1}{8}$ th wide; these last are divided into compartments, in each of which is a spiral; the disks bear elegant rosettes. These ornaments are all in relief and have evidently been produced by pressure from a mould or die. One plate bears a figure of an animal, probably a lion, bearing a resemblance to the figures of lions in gold, found at Mycenæ by Dr. Schliemann.

The colours are, turquoise blue, and some others, among them apparently white or grey, but the disintegration of the surface of many pieces makes it a difficult matter to decide what the colour really is.

Dr. Schliemann (v. page vii) has stated that he found in his excavations at Mycenæ disks and other pieces of vitreous pastes, which he believes to have been used as decorations for doors or other like uses. These would appear to be of much the same character as those found at Ialysos. As drops of glass were found with these ornaments at Ialysos, it would seem that all were made there, but doubt has been expressed whether the drops are not of later date. The drops are chiefly or wholly of uncoloured glass, and if the opinion of their more recent date be founded upon their less advanced condition of decomposition, it may be erroneous, for uncoloured glass is much less liable to decomposition than coloured containing large quantities of iron, copper, or other metallic bases. Dr. Schliemann has expressed a doubt whether some of the disks found at Mycenæ are not composed of pottery. Some disks in the British Museum brought from Egypt, which in some degree resemble those found at Mycenæ and Ialysos, would seem to be composed of glazed pottery; it is, however, often difficult to distinguish between some kinds of opaque glass and pottery unless the object be submitted to careful examination.

Mr. Newton has described in the "Academy" a discovery of articles of similar character at Spata in Attica. It is difficult or impossible to say whether these various objects are to be attributed to Greek or to Phœnician artisans; the rosette ornamentation of the disks seem to point to a connexion with Egypt as disks of pottery similarly ornamented have been found there; their probable date may be about the tenth century B.C.

Page xvii, line 11. Mr. Spencer Meade has pointed out to the writer that Pausanias (II. xxvii., 3) tells us that at Epidaurus in Argolis was a picture by Pausias (B.C. 360-330) of *Μέθη*, the Goddess of Drunkenness, drinking out of a glass bowl, *ἐξ ὑαλίνης φιάλης πίνουσα*, where the bowl was represented as transparent and a female face appearing through it.

Page xvi, line, 28. The passage in Herodotus is rather carelessly quoted and translated, it runs *ἀρτήματα λίθινα χυτὰ*, i.e., stony molten pendants.

Page xvi, line ult. Mr. Spencer Meade has favoured the writer with the following remarks on the use of the *ὄδλος* by Greek writers of early date. "Herodotus uses the Ionic form *ὄδλος* for the Attic *θαλός* twice in B. iii, c. 24, meaning some transparent stone, probably alabaster. It was employed for enclosing dead bodies. He says it was dug up abundantly in Egypt and easily worked. Diodorus Siculus, ii., 15, cites Ctesias, a contemporary of Herodotus, for the use of *ὄελος*, the Egyptians, he says, melted it and poured it around a golden statue which contained the ashes of the dead person, and adds that the substance abounded in Ethiopia. In Aristophanes, *Nubes*, 769, the burning glass is called, *ἡ ὄδλος* and, 767, *ἡ λίθος*, so probably a lens of rock crystal, the *ὄδλινα ἐκπώματα* of Acharn, 74, may perhaps have been of glass, though more likely were made of crystal. Plato, however, in his *Timæus*, 61 B., clearly speaks of glass, *ὄδλος*, and distinguishes it from fusible stone, *χυτὰ εἶδη*, and this appears to be the first example of the word so used, it meant originally a stone, see Schol. Nub. cl. Some have thought *ἡλεκτρον*, amber, to be alluded to in the passage."

It seems pretty clear from these passages that the original meaning of *ὄδλος* was crystal or other transparent stone, and that it was applied to glass on account of its resemblance to crystal, but when glass was opaque or coloured, as was probably the case with the ear ornaments of the crocodiles mentioned by Herodotus, and certainly with the emerald column which the same writer saw at Tyre, it was not so called by him. Ctesias apparently confounded glass or enamel with alabaster or some other mineral substance, or his expression may merely imply that there was much glass in Egypt, and that he not being aware that it was artificial supposed that it was a natural substance. In the *Periplus Maris Erythraei* sometimes attributed to Arrian (v. p. xi, note) the expression *λίθλος ὕαλης* occurs, but it cannot be doubted that glass is meant.

Page xvii, line 19, for "Phillip's" read "Phillipps."

" " 29, Cnidus, though often called an island, (as by Strabo) is more properly a peninsula, the lion was found not at Cnidus but about three miles to the northward (Newton, *Travels and Discoveries in the Levant*, B. ii, p. 214.)

Page xxi, note, line 9, for "compariri" read "compareri."

" " 12, for "æ" read "æs."

" " 19, for "Hæc" read "Hæc."

" " 3, (2nd col.) for "fit" read "fit."

" " 4, " for "hæc" read "hæc."

" In another passage in Pliny's *Hist. Nat.* (Lib. xxxiv, c. 8) *Lapis Alabandicus* is mentioned as an ingredient in glass, or as a substitute for it (?) "*liquatur igni ac funditur in usum vitri.*"

Page xxxiv, line 25, for "Cunæ" read "Cumæ."

Page xxxv, line 12. M. Jacquemart, *Hist. du Mobilier*, p. 581, mentions a "*coupe merveilleuse*" as belonging to Baron Gustave de Rothschild, on which birds, perched on delicate branches, are painted in enamel, surrounding the cup like a garland.

Page xli, line 13. Dr. Bruce (*Roman Wall*) states that many engraved gems are found about the site of the wall without settings, there is little probability that these are modern.

Page xlvī, note. The name of the cobbler of Beneventum was Vatinus, he was a favourite of Nero. The cup was called "*nasiterna*," and perhaps was the parent of the curious Spanish

drinking vessels with four or more spouts (*see* Cat. of Spanish glass). Martial has an epigram (Lib. xiv. 96) on these cups "Villa futoris calicem monumenta Vatini

Accipe, sed natus longior ille fuit."

Page i, note, line 1, for "arcâ" read "arcu."

Page li, " 9, for "mentitur" read "mentitus."

Page lii, line 2, for "xxvii, cap. 26" read "xxxvi, cap. 66."

" note, line 2, for "tonitur" read "tonitru."

Page lix. The famous table of emerald, part of the booty of Toledo when taken by Tarik in 711, should have been mentioned in the text. It is thus mentioned by El Makkari, as translated by Don Pascual de Gayangos (*Hist. of Mahommedan Dynasties in Spain*, p. 47).

"It was there (*i.e.*, at Toledo) that Tarik, son of Zeyad, found the table of Suleyman. The table was made out of one solid emerald, and when presented by Mufa to the Khalif Al-Walid was valued at one hundred thousand dinars."

Another account given in a MS. of A.D. 1174 (App. to the above-cited work, p. xlix) states that it was inlaid with precious stones of various kinds and hues, as well as with aromatic woods, that it was ornamented with several inscriptions in the Greek tongue, and that it was made of a solid piece of emerald, also that it had three golden feet.

El Makkari in another passage (p. 286) quotes Ibn Tayyan as describing the table as of pure gold, set with precious stones, and says that it was found on the altar of the principal church at Toledo, in which city it is said to have been made. According to some writers it had 365 feet, according to others four, or three, or none.

It was probably either the frontal of the altar or a super altar, the "emerald" was no doubt a large slab of Byzantine glass, and if it be true that the table bore Greek inscriptions, it was no doubt the work of Byzantine artists.

Page lxi. In a paper which has recently appeared in the *Journal of the Royal Asiatic Society*, Vol. X. pt. 1, Mr. E. T. Rogers has shown that many of these disks bear inscriptions stating them to be the weight of a "filâ" (a copper coin) of a dirham or of a dinar, while one is stated to be the quarter of a "ratl," a weight which has varied in various countries and times, this last disk weighs 1143.3 grains, and is in the British Museum. Mr. Rogers also mentions stamps on glass measures of capacity. The earliest of these disks which has as yet been noticed is one mentioned by Mr. Rogers as bearing the date A.H. 96, corresponding with A.D. 715. As is mentioned in page lxxvii, the Venetians made measures and weights in glass in A.D. 1279, and the Byzantines also made disks probably for use as weights, though when the Byzantine examples were made has not been ascertained as dates have not been found upon them. It seems probable that the Byzantines originated the practice, and that both Venetians and Egyptians imitated them.

Page lxii. Mr. Derby, of the South Kensington Museum, has kindly brought to the knowledge of the writer another passage of the Koran (Sura, 76) in which glass is mentioned; it runs thus, "Vessels of silver and goblets of glass shall be borne round among them; glass bottles like silver whose measure themselves shall mete."

Page lxviii. If we can place faith in the *Mahawanso* (the Chronicle of the Singhalese Kings) "Mirrors of glittering glass were carried in procession, B.C. 306" (Ceylon, by an Officer, late of the Ceylon Rifles, vol. II., p. 44), and festoons of beads like gems, probably glass beads. About the same date, "Windows, with ornaments like jewels, which were as bright as eyes," are also mentioned in the *Mahawanso*, this phrase would seem to indicate windows like those formerly in use in Europe, and more recently in the East, in which small pieces of glass coloured or uncoloured are fixed into frames of marble, stone, or stucco so perforated as to form patterns. The author of "Ceylon" states that the Hindus have been long aware that glass is a non-conductor of electricity, and placed lumps of it on the tops of their temples as a protection against lightning. He goes on to point out that Admiral Fitzroy (*Weather Book*, p. 441) states that "In Japan, China, Siam, Ceylon, and other Eastern countries a system has prevailed from time immemorial of placing lumps of glass on the pinnacles or other high points of buildings to avert lightning." An obscure passage in the *Mahawanso*, under A.D. 241, seems to refer to this practice; it runs thus: "Having placed a large

"gem on the top, he fixed below it for the purpose of averting lightning a vajira chumbata "like a ring." Turner, who translated the Mahawanfo, has rendered "vajira" by glass, but it is doubted whether it may not mean a loadstone or an iron magnet. However this may be, these passages from the Chronicle would appear to furnish ground for a confirmation of the belief that the making of glass in the further East has been earlier in date and more important in practice than has been usually supposed. The whole matter certainly deserves closer examination than it has as yet received.

The passage in Pliny's Nat. Hist. (Lib. xii. c. 19) in which it is said that the Troglodytes brought to Ocelis (now Ghella near Bab-el Mundeb) on their return voyages, objects of glass ("contra "revehunt vitrea") may refer to the import of Chinese or Singhalese glass destined for western markets.

Page lxxxvii, line 3. One of the earliest instances of a collection of Venetian glasses is that afforded by the catalogue of the objects of art which had belonged to Robertet, treasurer to Charles VIII., Louis II., and Francis I. of France. He formed his collection between 1504 and 1532 when his widow drew up the catalogue, it has been printed in the 30th Vol. of the proceedings of the Society of Antiquaries of France, and portions quoted by M. Bonaffé, *Collectionneurs de l'ancienne France* (p. 21). The Venetian glasses are thus mentioned, "quatre "cens beaux verres de Venise gentillisez des plus jolies gayetes que les verriers scauroient "inventer."

Page xcviij, line 15. Alexander Neckam, about one hundred years earlier, says the same thing (*De Naturis Rerum*, cap. cliv, *De Speculis*) "Dum integrum est speculum unica uno solo "inspiciente refultat imago, frangatur in plures vitrum, quot sunt ibi fractiones tot refultat bunt imagines. . . . Sed mira res subtrahe plumbum suppositum vitro jam nulla refultat bunt imago inspicientis."

Page c. Dalechamps (ob. 1586), in a note on the passage in Pliny's Natural History (L. 33, c. 9), in which mention is made of the reflexion of an image from gold, says, "Ut nostro "seculo Venetiis braetam argenteam vitreis speculis averfis impingunt."

Page ci, line 12. Between the words "that" and "were" insert "they."

Page cvij, line 21. In France also, paper oiled was commonly used in lieu of glass until about 1710. M. de Foville in an article in the *Économiste Française* says, "that not a century ago "there existed in France a corporation of châffilliers who put in windows of oiled paper."

Page cxix, line 1. Examples of (probably) French glass of the 13th century may be mentioned. They consist of the tube in which the thorn given by St. Louis, King of France, as one of those of the crown of thorns, is preserved in the treasury of the Abbey of St. Maurice in the Valais, and the pieces of glass which enclose it (v. Aubert Tréfor de l'Abbaye de St. Maurice, p. 170). In the treasury of St. Mark at Venice is a similar reliquary containing another of the thorns, also the gift of St. Louis, probably in this case also the thorn is enclosed in glass.

Page cxi, line 11. Fern contains a very large proportion of potash as compared with most other vegetable matter; 1,000 parts of dried fern contain 25 of potash, while like quantities of elm wood contain but $3\frac{1}{2}$, branches and bark of oak 2, beech wood 1, oak and fir wood $\frac{1}{2}$. (*British Industries; Acids, Alkalies, &c.* by Prof. Church, p. 40).

Page cxv, line 6. Al. Makkari also states (page 93 of translation by P. de Gayangos) that Murcia was renowned for the fabrication of glass and pottery, of both which materials large vases of the most exquisite and elegant shapes were made by the Moors.

Page cxxi. Among the objects found when the Island of Björkö, in the Malar Lake in Sweden, was explored a few years ago, were disks of glass about 3 inches in diameter by $1\frac{1}{4}$ in thickness, convex and well rounded at the sides, such are still used in Sweden in smoothing linen after it has been washed. The site is believed to be that of the city of Birka, which there is reason to believe was destroyed in the latter half of the eleventh century. These objects of glass may be surmised to have been brought from Germany.

Page cxxiv. M. Max Mißon, who began his travels through Holland, Germany, and Italy in 1687, gives a curious account (*Voyage d'Italie, &c.*, ed. 1743, vol. i., page 99) of the arrangement of these German drinking vessels at the time he travelled; he says, "You shall also

" know that glasses are as much respected in this country as wine is loved ; they are paraded everywhere. Most of the rooms are wainscoted for about two-thirds of their height, and the glasses are arranged all round on the cornice of the wainscot, like the pipes of an organ. They begin by the little ones and end by the great, and these great are melon-glasses (cloches à melon), which one is obliged to empty without pausing when any health of special importance is to be drunk."

Page cxxxi. The story told in the *Historia Brittonum*, attributed to Nennius, of a tower of glass which appeared off the coast of Ireland ; also shows that glass was well known among the Romanised Britons. This legend possibly suggested the curious story of the descent of Alexander the Great into the sea in a house of glass (v. *Hist. Brit.*, ed. Rev. W. Gunn, Preface, p. xxx).

Page cxxxii. Doubt has been thrown upon the antiquity of the bottles found in or near the walls of churches, and it has been shown that a superstitious practice has existed in England of burying in churchyards blood, hair, or like substance, proceeding from sick persons, with the hope of thereby obtaining relief to the patient. A forthcoming paper in the *Archeologia of the Society of Antiquaries*, by Mr. Fowler, will probably throw considerable light on this subject.

Page cxxxiii, line 15. In the church of Lingfield, Surrey, is an effigy of one of the Cobham family, circa 1380, in armour, with the large belt in use at that period, the links of this were inlaid with pieces of blue glass, but during a "restoration" which took place some years ago these were abstracted.

Page cxxxvi. It should have been stated in the text that Armigill Wade was Clerk of the Council. He lived at Belfize, near Hampstead, which house belonged to him.



CATALOGUE OF GLASS
IN THE
SOUTH KENSINGTON MUSEUM COLLECTIONS.

* * *The Numbers at the head of these descriptions are those of the Register in the Museum.*

SECTION I.—EGYPT AND PHÆNICIA.

1025. '68.



BOTTLE. "Alabastron." Glas. Black ground, with yellow, blue, and green zigzag lines. Probably ancient Egyptian. H. 4 in., W. $1\frac{3}{8}$ in. 16/.

1026. '68.

BOTTLE. "Alabastron." Glas. Turquoise ground, with reddish brown and yellow zigzag lines. Probably ancient Egyptian. H. $3\frac{5}{8}$ in., W. $1\frac{1}{4}$ in. 12/.

1028. '68.

BOTTLE. "Alabastron." Glas. Dark blue, with yellow wavy lines. Probably ancient Egyptian. H. $3\frac{3}{8}$ in., W. $1\frac{1}{4}$ in. 12/.

39057. Wt. 13458.

A

1029. '68.

BOTTLE. "Alabaſtron." Blue glaſs. With yellow and white waved lines. Probably ancient Egyptian. H. 3 in., W. $1\frac{1}{2}$ in. 14/.

1047. '68.

BOTTLE. Glaſs. For holding coſmetic paint, blue ground, ornamented with yellow and white lines, the mouth lotus-shaped. Probably ancient Egyptian. H. $3\frac{1}{4}$ in., W. $1\frac{1}{8}$ in. 5/.

(See Plate I., fig. 1.)

986. '68.

BOTTLE. Glaſs. Oviſorm, with two ſmall handles, dark blue ground, with yellow and white zigzags, pointed baſe and circular foot. Ancient Egyptian or Phœnician. H. 5 in., W. $1\frac{3}{4}$ in. 22/.

1020. '68.

BOTTLE. "Alabaſtron." Glaſs. Cylindrical, with broad lip and two ſmall ears, green, with yellow and white wavy lines. Ancient Egyptian or Phœnician. H. $7\frac{1}{8}$ in., W. 2 in. 28/.

1021. '68.

BOTTLE. "Alabaſtron." Glaſs. Dark blue, with yellow and white wavy lines. Ancient Egyptian or Phœnician. H. $5\frac{1}{8}$ in., W. 2 in. 12/.

1022. '68.

BOTTLE. "Alabaſtron." Glaſs. Dark blue, with yellow and white wavy lines. Ancient Egyptian or Phœnician. H. $5\frac{3}{4}$ in., W. $1\frac{3}{8}$ in. 24/.



BOTTLE.

VASE.

VASE.

Vincent Brodsky Day & Son, Ltd.

1024. '68.

BOTTLE. "Alabastron." Glafs. Brown, with white and yellow wavy lines. Ancient Egyptian or Phœnician. H. 4 in., W. $1\frac{1}{4}$ in. 14/.

994. '68.

BOTTLE. Glafs. Blue, with three handles on the neck. Ancient Egyptian or Phœnician. H. $2\frac{3}{4}$ in., W. $1\frac{3}{4}$ in. 10/.

1002. '68.

JUG (Ænochoe). Glafs. Trefoil lip, dark blue, with yellow, turquoife, and white wavy lines. Ancient Egyptian or Phœnician. H. $4\frac{3}{4}$ in., W. $2\frac{3}{4}$ in. 16/.

1003. '68.

JUG (Ænochoe). Glafs. Trefoil lip, dark blue, with white and yellow wavy lines. Ancient Egyptian or Phœnician. H. $4\frac{3}{4}$ in., W. 3 in. 16/.

1004. '68.

JUG (Ænochoe). Glafs. Trefoil lip, dark blue, with small white zigzags, and yellow, white, and light blue lines. Ancient Egyptian or Phœnician. H. 4 in., W. $2\frac{3}{4}$ in. 21/.

1007. '68.

JUG (Ænochoe). Glafs. Trefoil lip, with white zigzags and spiral lines. Ancient Egyptian or Phœnician. H. $3\frac{1}{4}$ in., W. $2\frac{1}{4}$ in. 14/.

1008. '68.

JUG (Ænochoe). Glaſs. Trefoil lip, one handle, dark blue, with yellow and turquoife wavy lines. Ancient Egyptian or Phœnician. H. $3\frac{1}{2}$ in., W. $2\frac{1}{8}$ in. 14/.

1009. '68.

JUG (Ænochoe). Glaſs. Trefoil lip, blue with white and yellow ſpiral lines and zigzags. Ancient Egyptian or Phœnician. H. $3\frac{1}{4}$ in., W. $2\frac{1}{4}$ in. 21/.

987. '68.

JUG (Ænochoe). Glaſs. With trefoil lip, blue ground, with opaque amber and white zigzags and circles. Ancient Egyptian or Phœnician. H. $3\frac{1}{8}$ in., W. 2 in. 8/.

1018. '68.

JUG (Ænochoe). Glaſs. Trefoil lip, blue, with yellow ſpiral lines. Ancient Egyptian or Phœnician. H. 2 in., W. $1\frac{3}{8}$ in. 5/.

1027. '68.

LACHRIMATORY. Glaſs. Blue, with yellow wavy lines. Ancient Egyptian or Phœnician. H. $4\frac{1}{4}$ in., W. $1\frac{1}{8}$ in. 12/.

73. '53.

VASE, "Amphora." Blue glaſs. With waves or zigzags of turquoife and yellow glaſs. Ancient Egyptian or Phœnician. H. $3\frac{3}{4}$ in., diam. $1\frac{3}{4}$ in. 8/ 8s.

984. '68.

VASE, "Amphora." Glafs. Dark blue, with yellow and turquoise zigzags; oviform, on foot. Ancient Egyptian or Phœnician. H. 5 in., W. $2\frac{1}{2}$ in. 14*l*.

985. '68.

VASE, "Amphora." Glafs. Oviform, with handles, opaque white ground, with dark claret-coloured zigzags. Ancient Egyptian or Phœnician. H. $4\frac{1}{4}$ in., W. $2\frac{1}{2}$ in. 32*l*.

(See Plate I., fig. 2.)

988. '68.

VASE, "Amphora." Glafs. Dark blue, with white zigzags and spiral lines. Ancient Egyptian or Phœnician. H. $3\frac{1}{2}$ in., W. 2 in. 16*l*.

989. '68.

VASE, "Amphora." Glafs. Of flattened spherical form, purple ground, with white wavy lines; two pierced bosses at the bottom. Ancient Egyptian or Phœnician. H. $3\frac{1}{2}$ in., W. $2\frac{1}{2}$ in. 21*l*.

991. '68.

VASE, "Amphora." Glafs. Pointed base; dark blue ground with turquoise and yellow zigzags. Ancient Egyptian or Phœnician. H. 3 in., W. $2\frac{1}{8}$ in. 14*l*.

(See Plate I., fig. 3.)

992. '68.

VASE, "Amphora." Glafs. Oviform; with pointed base, opaque white ground, with ruby-coloured zigzag ornament. Ancient Egyptian or Phœnician. H. $3\frac{3}{4}$ in., W. $1\frac{1}{2}$ in. 16*l*.

995. '68.

VASE, "Amphora." Opaque white glaſs. Pointed baſe ; dark brown zigzags and circles. Ancient Egyptian or Phœnician. H. $2\frac{1}{2}$ in., W. $1\frac{1}{2}$ in. 14/.

996. '68.

VASE, "Amphora." Glaſs. Pointed baſe ; amber-coloured ground, with yellow and opal zigzags. Ancient Egyptian or Phœnician. H. $2\frac{1}{2}$ in., W. $1\frac{1}{2}$ in. 5/.

997. '68.

VASE, "Amphora." Semi-transparent glaſs. Ovoid with pointed baſe ; dark green, with yellow zigzags edged with turquois blue. Ancient Egyptian or Phœnician. H. 3 in., W. $1\frac{3}{4}$ in. 14/.

1001. '68.

VASE, "Amphora." Dark blue glaſs, with pointed baſe. Ancient Egyptian or Phœnician. H. 3 in., W. $1\frac{1}{2}$ in. 8/.

1006. '68.

VASE, "Amphora." Glaſs. Of flattened ſpherical form ; turquois, with alternate dark blue and yellow wavy lines ; blue handles. Ancient Egyptian or Phœnician. H. $4\frac{1}{2}$ in., W. $3\frac{1}{4}$ in. 25/.

(See Plate II.)

1010. '68.

VASE, "Amphora." Glaſs. Spherical, on a foot ; turquois ground, with yellow, white, and a blue wavy belt ; dark blue borders ſtriped with white. Ancient Egyptian or Phœnician. H. $2\frac{3}{4}$ in., W. $2\frac{1}{4}$ in. 16/.



Vincent Brocks, Dny & Son, Ltd.

VASE.

Ancient Egyptian or Phoenician. (1000-68.)

1011. '68.

VASE, "Amphora." Glafs. Opaque blue ground; white zigzags edged with yellow; three handles. Ancient Egyptian or Phœnician. H. $2\frac{1}{4}$ in., W. 2 in. 30*l*.

912. '75.

VASE. Dark blue glafs, with striped ornament in green and yellow enamel. It has one handle and a pointed base. Ancient Egyptian or Phœnician. H. $2\frac{1}{8}$ in., diam. $1\frac{1}{8}$ in. 3*l*.



SECTION II.—GLASS OF ROME AND OF THE
PROVINCES OF THE ROMAN EMPIRE.

1049. '68.



ALL. Glafs. Blue. With fpiral white ftripes,
decreafing in breadth upwards. Ancient Roman.
Diam. $2\frac{1}{4}$ in. 5*l*.

1063. '68.

BEAD. Glafs. Cylindric coats of white, blue, and red,
cut to form a ftriped pattern. Ancient Roman? 2 in.
by $1\frac{1}{2}$ in. 8*l*.

Beads of this pattern have been found in many countries, and in some instances are in a ftate of remarkable prefervation, apparently inconfiftent with great age. It feems poffible that the pattern has been copied for many centuries. In the Britifh Mufeum is a rod nine inches long of a very clofely allied pattern, which has the appearance of being Venetian. (*See* Proceedings of Society of Antiquaries, Second Series, vol. ii., p. 334, and Catalogue of the Slade Collection, p. 10.)

40. '67.

BEAD of a Necklace, many fided. Green glafs, overlaid
with various coloured paftes. Ancient Roman. Diam.
 $1\frac{1}{4}$ in. Given by the Rev. Greville J. Chefter.

1062. '68.

BEADS (thirty-one). A string, variegated glass, with masks and ornaments in relief. Ancient Phœnician or Roman. Length of string 17 in. 12*l*.

The central bead, which is cylindrical, has rude masks formed by pellets of yellow, white enamel, &c. ; beads of this kind, which are not uncommon, have been thought to be of Egyptian manufacture. Those on each side are of a like character, though without masks. Many varieties both of pattern and method of execution will be found in the string, some closely resemble those found in Anglo-Saxon graves, others those made at the present time at Venice.

1056. '68.

BOSS. Glass. Circular. With pattern in white on amber ground. Ancient Roman. H. $\frac{3}{4}$ in., W. 1 in. 3*l*.

1057. '68.

BOSS. Glass. Hour-glass shape, black ground, with pattern of white stripes. Ancient Roman. H. $1\frac{1}{4}$ in., W. $\frac{3}{4}$ in. 3*l*.

1058. '68.

BOSS. Glass. Circular. With pattern in white on black ground. Ancient Roman. H. $\frac{3}{4}$ in., W. $1\frac{1}{4}$ in. 3*l*.

1023. '68.

BOTTLE. Glass. Cylindric. Green ground, with wavy stripes of gold bordered with white and blue lines. Ancient Roman. H. $5\frac{3}{4}$ in., W. $1\frac{1}{8}$ in. 65*l*.

Vessels of this kind are very rare, one fine example very closely resembling this, though larger, is in the British Museum (Slade Collection). They have been thought to be of Egyptian origin.

1019. '68.

BOTTLE. Glaſs. Blue, with handles connected by a blue and white cord continued round the lower part. Ancient Roman. H. 2 in., W. $1\frac{5}{8}$ in. 8/.

1030. '68.

BOTTLE. Amber glaſs. Four-fided. Moulded with masks and annulets. Ancient Roman. H. $2\frac{3}{4}$ in., W. $1\frac{1}{8}$ in. 12/.

1031. '68.

BOTTLE. Blue glaſs. Bell-shaped. Iridescent ſurface. Ancient Roman. H. $2\frac{3}{4}$ in., W. $1\frac{3}{4}$ in. 5/.

1032. '68.

BOTTLE. Bell-shaped. Purple, with iridescent ſurface. Ancient Roman. H. $2\frac{3}{4}$ in., W. $1\frac{3}{4}$ in. 5/.

1033. '68.

BOTTLE. Moulded glaſs. Basket-work pattern, of light green colour, iridescent. Ancient Roman. H. $2\frac{7}{8}$ in., W. $1\frac{1}{2}$ in. 3/.

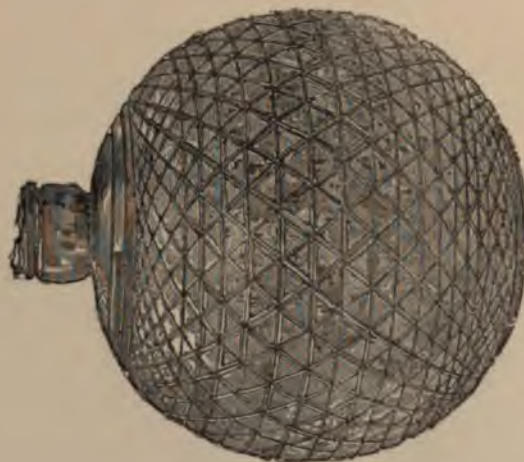
1000. '68.

BOTTLE (with handles). Blue glaſs. Mould in form of a bivalve ſhell. Ancient Roman. H. $2\frac{1}{2}$ in., W. $1\frac{1}{2}$ in. 8/.

990. '68.

BOTTLE. Glaſs. Dull ruby, mould in ſcrolls and flutings. Ancient Roman. H. $2\frac{3}{4}$ in., W. $1\frac{3}{4}$ in. 16/.

PLATE III.



BOTTLE.
Roman, 2nd or 3rd century,
(8988. '63.)



DETAIL. FULL SIZE.



SAUCER.
Ancient Roman,
(978. '68.)



BOTTLE.
Ancient Roman,
(998. '68.)

1013. '68.

BOTTLE. Glasf. Brown, with white stripes and iridescent surface (injured by fire). Ancient Roman. H. $2\frac{3}{8}$ in., W. $2\frac{1}{8}$ in. 6*l*.

1014. '68.

BOTTLE. Opaque white glasf. Moulded in the form of a double face. Ancient Roman. H. $2\frac{1}{2}$ in., W. $1\frac{1}{2}$ in. 14*l*.

1016. '68.

BOTTLE. Blue glasf. Moulded in form of a fir-cone. Ancient Roman. H. $3\frac{1}{8}$ in., W. $1\frac{7}{8}$ in. 15*l*.

1017. '68.

BOTTLE. Glasf. Light pink, with circular ridges. Ancient Roman. H. 3 in., W. $1\frac{3}{8}$ in. 15*l*.

2875. '53.

BOTTLE. Glasf of various colours. Ancient Roman. (Bandinel Collection.)

8988. '63.

BOTTLE. Glasf. Spherical. Engraved with intersecting circles. Roman. Probably of the 2nd or 3rd century. H. $4\frac{1}{2}$ in., W. 4 in. 2*l*. 12*s*.

(See Plate III., fig. 1.)

1015. '68.

BOTTLE. Glasf. Probably used for essences, of hexagonal form, ornamented with implements used in the bath, covered with iridescence. Ancient Roman. H. $3\frac{1}{2}$ in., W. $1\frac{1}{2}$ in. 30*l*.

998. '68.

BOTTLE. Glaſs. Brown, with wavy ſtripes of blue, green, and white, in imitation of onyx. Ancient Roman. H. $2\frac{1}{4}$ in., W. 2 in. 14*l*.

(See Plate III., fig. 3.)

999. '68.

BOTTLE. Blue glaſs. Moulded in form of two female heads. Ancient Roman. H. $2\frac{1}{4}$ in., W. $1\frac{1}{2}$ in. 20*l*.

(See Plate IV., fig. 1.)

1037. '68.

BOTTLE. Brown glaſs. In form of a dried date. Ancient Roman. H. 3 in., W. 1 in. 7*l*.

1036. '68.

BOTTLE. Blue glaſs, with projecting ribs. Ancient Roman. H. $3\frac{1}{2}$ in., W. $1\frac{1}{4}$ in. 7*l*.

1039. '68.

BOTTLE. Blue glaſs, of globular form. Ancient Roman. H. 2 in., W. $1\frac{7}{8}$ in. 6*l*.

1299. '70.

BOTTLE. Glaſs. Square. Green, with neck and ſtriated handle; at the bottom, between four concentric circles, the letters NE. Romano-Britiſh. H. 8 in., W. $4\frac{3}{8}$ in. (Gibbs Bequeſt.)

1300. '70.

BOTTLE. Glaſs. Circular, light green, with ſhort neck and ſpreading ſtriated handle. Romano-Britiſh. H. $8\frac{1}{2}$ in., diam. $4\frac{1}{8}$ in. (Gibbs Bequeſt.)



BOTTLE

MEDALLION.

 SI, AB (a fragment).

Young's Publishing Group & Books Ltd.

1301. '70.

BOTTLE. Glafs. Circular, light green, with short neck and spreading striated handle. Romano-British. H. $8\frac{1}{2}$ in., diam. $3\frac{3}{4}$ in. (Gibbs Bequest.)

1302. '70.

BOTTLE. Glafs. Square form, green, with concentric circles at the bottom on the outside. Romano-British. H. 5 in., W. $2\frac{3}{4}$ in. (Gibbs Bequest.)

1303. '70.

BOTTLE. Glafs. Light green, with long neck and bulb-shaped body. Romano-British. H. $5\frac{3}{8}$ in., diam. 3 in. (Gibbs Bequest.)

1304 . '7.

BOTTLE. Glafs. Light green, with long neck and bulb-shaped body. Romano-British. H. $4\frac{3}{4}$ in., diam. $2\frac{1}{2}$ in. (Gibbs Bequest.)

1305. '70.

BOTTLE. Glafs. Light green, with long neck and bulb-shaped body. Romano-British. H. $5\frac{1}{4}$ in., diam. $2\frac{1}{8}$ in. (Gibbs Bequest.)

1307. '70.

BOTTLE. Glafs. Colourless, of unusual shape; long neck, the body of irregular bulbs, expanding in size

downwards, the loweſt having a foot. Romano-Britiſh. H. $9\frac{1}{4}$ in. (Gibbs Bequeſt.)

1668. '68.

BOTTLE (a fragment). Glaſs. Made of ſections of ruby, green, and yellow canes. Ancient Roman. 4 in by $3\frac{1}{8}$ in. 8*l*.

970. '68.

BOWL. Glaſs. Made up of ſections of canes, of green grounds with yellow lines, forming a ſtar pattern; the centres blue; the edge a twiſt of white, yellow, and green; a few canes have a blue ground and white ſtars. Ancient Roman. H. $3\frac{1}{4}$ in., diam. $5\frac{1}{4}$ in. 40*l*.

971. '68.

BOWL. Glaſs. Made up of ſections of canes, of green grounds with yellow lines, forming a ſtar pattern; the centres ruby; a few canes have a blue ground and white ſtars; the edge black and white twiſted. Ancient Roman. H. 3 in., diam. $5\frac{1}{8}$ in. 30*l*.

972. '68.

BOWL. Glaſs. Brown, ſtreaked with white, in imitation of fardonyx. Ancient Roman. H. 3 in., diam. $5\frac{1}{4}$ in. 40*l*.

973. '68.

BOWL. Glaſs. Made up of ſections of canes, blue, white, yellow, and ruby; in the lower part the ſections have been more extended than is uſual; ſome of the canes ſhow ſtars, ſome ſpirals; edge blue and white. Ancient Roman. H. $3\frac{1}{4}$ in., diam. 5 in. 70*l*.

974. '68.

BOWL. Glafs. Ribbed, brown or fard colour. Ancient Roman. H. $2\frac{1}{4}$ in., diam. 5 in. 28/.

976. '68.

BOWL. Glafs. Amber-coloured; cut with horizontal lines. Ancient Roman. H. $1\frac{3}{4}$ in., diam. $5\frac{3}{4}$ in. 20/.

983. '68.

BOWL. Transparent glafs. Ornamented with a circle of triple blue bosses. Ancient Roman. H. 2 in., diam. $3\frac{3}{4}$ in. 5/.

1311. '70.

BOWL. Glafs. Light green. Romano-British. H. 3 in., diam. 7 in. (Gibbs Bequest.)

1312. '70.

BOWL. Glafs. Ornamented on the exterior with slightly raised ribs, somewhat resembling pillar moulding. Romano-British. H. $3\frac{1}{2}$ in., diam. $7\frac{1}{2}$ in. (Gibbs Bequest.)

969. '68.

BOWL. Glafs. On a foot, ribbed outside; the pattern formed by canes of yellow, red, white, and blue, apparently interlaced. Ancient Roman. H. $4\frac{1}{2}$ in., diam. $6\frac{1}{8}$ in. 125/.

(See Plate V.)

1074. '68.

CAMEO (a fragment). Ground of black glafs, on which is a portion of a draped human figure in low relief. Ancient Roman. 7 in. by $5\frac{3}{4}$ in. 6/.

This is a very remarkable example of the ſame proceſs as that by which the Portland vaſe was made, the figure of which we have here a part could not have been leſs than about fifteen inches high, probably very few examples exiſt which have belonged to works of this claſs of equal ſize.

The drapery is beautifully modelled and executed.

916. '55.

CUP or Patera. Clear glaſs, with a flight green tinge.
Ancient Roman. Diam. $6\frac{5}{8}$ in. 1*l.* os. 3*d.*

1041. '68.

CUP. Glaſs. Light blue, with lines marked by the lathe.
Ancient Roman. H. $3\frac{3}{4}$ in., W. $2\frac{3}{4}$ in. 26*l.*

1042. '68.

CUP. Glaſs. Blue, with lines marked by the lathe.
Ancient Roman. H. 5 in., W. $2\frac{3}{4}$ in. 22*l.*

1048. '68.

CUP. Glaſs. Flat, baſin-like form. Made up of canes
of blue, opaque white and pale ruby. Ancient Roman.
H. 1 in., W. $3\frac{1}{8}$ in. 8*l.*

1071. '68.

CUP (two-handled). Green glaſs. With irideſcent ſurface;
one half wanting. Ancient Roman. $4\frac{1}{8}$ in. by $2\frac{5}{8}$ in.
12*l.*

1053, 1054. '68.

DISKS (two). Circular. Blue tranſparent glaſs mixed
with opaque white. Ancient Roman. Diam. $1\frac{1}{2}$ in. 6*l.*

1064. '68.

FIGURE (a fragment). The fore part of a bull-dog, pressed glass. Ancient Roman. $2\frac{1}{2}$ in. by $1\frac{3}{4}$ in. 2*l*.

The glass is unusually pure in colour, and free from bubbles, it may perhaps be doubted whether it is not of more recent date.

1078. '68.

FIGURE of a Bird. Blue glass. On a white stand. Ancient Roman. H. $1\frac{1}{4}$ in., L. $1\frac{1}{4}$ in. 5*l*.

6044 to 6093. '59.

FRAGMENTS (50) of ancient Roman glass of many varieties. Dating probably from the 2nd to the 4th century. Cut into various shapes and sizes. 2*l*. 10*s*.

6094 to 6143. '59.

FRAGMENTS (50) of ancient Roman glass of many varieties. Dating probably from the 2nd to the 4th century. Cut into various shapes and sizes. 2*l*. 10*s*.

6144 to 6193. '59.

FRAGMENTS (50) of ancient Roman glass of many varieties. Dating probably from the 2nd to the 4th century. Cut into various shapes and sizes. 2*l*. 10*s*.

6194 to 6243. '59.

FRAGMENTS (50) of ancient Roman glass of many varieties. Dating probably from the 2nd to the 4th century. Cut into various shapes and sizes. 2*l*. 10*s*.

6244 to 6343. '59.

FRAGMENTS (100) of ancient Roman glaſs of many varieties. Dating probably from the 2nd to the 4th century. Cut into various ſhapes and ſizes. 5*l*.

6344 to 6393. '59.

FRAGMENTS (50) of ancient Roman glaſs of many varieties. Dating probably from the 2nd to the 4th century. Cut into various ſhapes and ſizes. 2*l*. 10*s*.

6394 to 6443. '59.

FRAGMENTS (50) of ancient Roman glaſs of many varieties. Dating probably from the 2nd to the 4th century. Cut into various ſhapes and ſizes. 2*l*. 10*s*.

6444 to 6496, and 6477*a* to 6496*a*. '59.

FRAGMENTS (73) of ancient Roman glaſs of many varieties. Dating probably from the 2nd to the 4th century. Cut into various ſhapes and ſizes. 3*l*. 8*s*.

896 to $\frac{896}{10}$. '75.

FRAGMENTS of mural decorations, &c., ſaid to have been found in the ruins of a villa about two miles from Rome, which belonged to Lucius Verus. They comprise :

- (*a.*) Six plaſter ſlabs ſhowing varieties of patterns compoſed of ſhaped pieces of glaſs. 896 to $\frac{896}{8}$. '75.



FRAGMENTS OF MURAL DECORATION.
Roman. 3rd or 4th Century. (806-75.)

(b.) Twenty-four pieces of shaped glaſs of various colours.

$\frac{896}{6}$. '75.

(c.) Two fragments of veſſels of opaque white glaſs.

$\frac{896}{7.8}$. '75.

(d.) Seventeen fragments of glaſs of various colours.

$\frac{896}{9}$. '75.

(e.) Twenty-four pieces ſhaped as bands of glaſs of various colours.

$\frac{896}{10}$. '75.

(f.) Fragments of glaſs of various colours.

Roman. 3rd or 4th century. 20/.

(See Plate VI.)

1072. '68.

FRAGMENT of Frieze. Blue glaſs, with a Cupid in relief, from a mould. Ancient Roman. $2\frac{1}{4}$ in. by 2 in. 6/.

1073. '68.

FRAGMENT of Frieze. Blue glaſs. With a griffin and a vaſe in relief, from a mould. Ancient Roman. $2\frac{1}{4}$ in. by $1\frac{3}{4}$ in. 6/.

1066. '68.

FRAGMENT of Cornice. Blue glaſs. Moulded, leaf pattern. Ancient Roman. $2\frac{1}{4}$ in. by 1 in. 4/.

1067. '68.

FRAGMENT of Frieze. Blue glaſs. With the ſkull of an ox, a feſtoon, &c., from a mould. Ancient Roman. $2\frac{1}{4}$ in. by $1\frac{3}{4}$ in. 6/.

The frieze when entire muſt have been of conſiderable ſize.

1070. '68.

FRAGMENT of Bottle. Glaſs. Brown, with white circles in imitation of oriental onyx. Ancient Roman. $3\frac{3}{4}$ in. by 3 in. 8/.

1034. '68.

HANDLE of a Vaſe. Glaſs. In form of a duck's head, of amber colour, with white feſtoons, irideſcent. Ancient Roman. H. $4\frac{1}{4}$ in., W. 1 in. 10/.

1069. '68.

HANDLE of a Vaſe. Glaſs. Fluted, beautifully irideſcent. Ancient Roman. 6 in. by 2 in. 8/.

1005. '68.

JUG (Ænochoe). Glaſs. Claret-coloured, with white ſpots. Ancient Roman. H. $3\frac{3}{4}$ in., W. $3\frac{1}{4}$ in. 16/.

1035. '68.

LACHRIMATORY. Glaſs. Covered with opal irideſcence (injured by fire). Ancient Roman. H. 4 in., W. $1\frac{3}{8}$ in. 2/.

1038. '68.

LACHRIMATORY. White glaſs. Partly covered with opal irideſcence. Ancient Roman. H. $2\frac{3}{4}$ in., W. $1\frac{1}{8}$ in. 4/.

1050. '68.

MASK. Opaque green glaſs. A tragic maſk in relief; impreſſion from a mould. Ancient Roman. L. $2\frac{1}{4}$ in., W. 2 in. 6/.

8990. '63.

MEDALLION. Blue glass. With a figure of a youth etched on gold leaf, covered with white glass. Ancient Roman. Diam. $\frac{3}{4}$ in. 1*l.* 5*s.*

1051. '68.

MEDALLION. Circular. Light green glass. With a boy's bust etched on gold leaf. Ancient Roman. Diam. $1\frac{1}{8}$ in. 3*l.*

This and the following number belong to the class mentioned in page xxxvii of the Introduction, as to the antiquity of which doubt has been expressed.

1052. '68.

MEDALLION. Circular. Blue glass. With a portrait of a male figure etched on gold leaf. Ancient Roman. Diam. $1\frac{3}{4}$ in. 10*l.*

275. '74.

MEDALLION. Blue glass (imperfect), moulded in relief with a Roman bust, possibly of the Emperor Tiberius. In gold frame. Antique Roman. Diam. $1\frac{9}{16}$ in. (Webb Collection.) 10*l.*

280. '74.

MEDALLION. Paste, with a bust in high relief, probably of a Roman emperor. Antique Roman $1\frac{3}{8}$ in. by 1 in. (Webb Collection.) 10*l.*

276. '74.

MEDALLION. Blue glass, moulded with a mask of Medusa. Antique Roman. Diam. $2\frac{3}{8}$ in. (Webb Collection.) 10*l.*

1043. '68.

MODEL of a Hand (fico). Blue glaſs. With ſhaded green ſtripes, like the Venetian Schmeltz. Ancient Roman. H. $2\frac{1}{4}$ in., W. 1 in. 15/.

1055. '68.

ORNAMENT. Blue glaſs. In form of a leaf. Ancient Roman. H. 2 in., W. $1\frac{3}{4}$ in. 4/.

975. '68.

PATERA. Glaſs. Of uniform green colour. The ſurface ground into ſhape. Ancient Roman. H. $1\frac{1}{8}$ in., diam. $6\frac{1}{8}$ in. 40/.

977. '68.

PATERA. Glaſs. Made up of ſections of canes of green and yellow, purple and white, both having red centres, the edge black and white. Ancient Roman. H. 1 in., diam. $5\frac{1}{8}$ in. 40/.

979. '68.

PATERA. Glaſs. Made up of ſections of canes, green ground with a yellow ſpiral line, the edge of blue and white. Ancient Roman. H. $1\frac{1}{4}$ in., diam. 5 in. 20/.

1040. '68.

PATERA. Glaſs. Opal-coloured irideſcent ſurface. Ancient Roman. Diam. 4 in., H. $\frac{5}{8}$ in. 6/.

978. '68.

SAUCER. Glafs. The bowl made up from canes containing twisted threads of opaque white glafs; the edge brown. Ancient Roman. H. $1\frac{1}{4}$ in., diam. $5\frac{1}{8}$ in. 20/.

From fuch examples the Venetians doubtlefs took the idea of their "vitro di trina," *i.e.*, lace glafs. Fragments of antique glafs thus made are not uncommon, but entire veffels are rare.

980. '68.

SAUCER. Glafs. Made up of canes having a fpiral line of white on a brown ground, and of pieces of opaque white, yellow, and green, and fections of coloured canes cut at various angles; the edge brown and white. Ancient Roman. H. $1\frac{1}{4}$ in., diam. $5\frac{1}{4}$ in. 40/.

981. '68.

SAUCER. Glafs. Amber-coloured, compofed of fections of coloured canes cut at various angles, and pieces of white, yellow, and lavender opaque glafs; the edge brown and white. Ancient Roman. H. $1\frac{1}{4}$ in., diam. $5\frac{1}{8}$ in. 40/.

982. '68.

SAUCER. Glafs. Amber-coloured, compofed of fections of canes with a fpiral line on an amber ground cut at various angles, and pieces of opaque yellow and white glafs. Ancient Roman. H. 1 in., diam. $4\frac{1}{2}$ in. 30/.

1061. '68.

SLAB of Glafs. Compofed of canes of two fhades of green cut in fections. Ancient Roman. 6 in. by $2\frac{1}{4}$ in. 5/.

1065. '68.

SLAB (a fragment). Glaſs, moſaic, ground of red glaſs, with black, yellow, and white lozenges. Ancient Roman. 3 in. by 2 in. 6/.

1075. '68.

SLAB of Glaſs (a fragment). Black ground, with yellow circles, irideſcent ſurface. Ancient Roman. 8 in. by $7\frac{1}{2}$ in. 8/.

1076. '68.

SLAB of Glaſs (a fragment). Made of canes of large ſize with red centres and lines of white and green on a dark ground. Ancient Roman. $3\frac{3}{4}$ in. by $2\frac{3}{8}$ in. 6/.

This is executed by the proceſs deſcribed in Introduction, p. xxv, rods of glaſs being prepared and then joined together.

1077. '68.

SLAB of Glaſs (a fragment). With a pattern of flowers, ſtars, &c., on blue ground. Ancient Roman. 3 in. by 2 in. 8/.

1060. '68.

TABLET. Opaque lavender-coloured glaſs. Bacchanalian figure, with lion's ſkin, holding a thyrfus, in low relief, made in a mould. Ancient Roman. H. 5 in., W. $2\frac{3}{4}$ in. 10/.

(See Plate VII.)

1012. '68.

VASE, "Amphora." Dull claret-coloured glaſs, preſſed into facets. Ancient Roman. H. $2\frac{1}{2}$ in., W. $1\frac{3}{8}$ in. 14/.

PLATE VII.



TABLET.
Ancient Roman.
(1060. '68.)

2427. '56.

VASE. Glafs. Surrounded with transverse flutings.
Ancient Roman. H. $5\frac{1}{4}$ in., diam. $2\frac{5}{8}$ in. 2*l.* 10*s.*

An example of the clear pure white glafs mentioned in page xlvii of Introduction, probably of late date.

993. '68.

VASE, "Amphora." Green glafs. Moulded with a male
and a female head. Ancient Roman. H. $3\frac{1}{4}$ in., W.
 $1\frac{3}{4}$ in. 8*l.*

1044. '68.

VASE. Blue glafs. With broad lip and foot. Ancient
Roman. H. $1\frac{1}{4}$ in., W. $1\frac{3}{8}$ in. 6*l.*

1308. '70.

VESSEL, fragments of. Glafs. The upper part and
bottom only; olive green, the lower part of the neck
and the body ribbed. Romano-British. Diam. of base, $3\frac{3}{8}$ in.
(Gibbs Bequest.)


1310. '70.

VESSEL, a fragment. Glafs. The neck and striated
handle only. Romano-British. H. 5 in. (Gibbs
Bequest.)



SECTION III.—EGYPT AND THE EAST (CHINA
EXCEPTED), AFTER A.D. 600.

1891a. '55.

 BOTTLE. Glas. Square, with iris and other flowers in relief, gilt and enamelled. Persian. H. $5\frac{1}{4}$ in., W. $2\frac{3}{4}$ in. (Bernal Collection.) 4*l.* 12*s.* 6*d.*

14. '67.

BOTTLE. Enamelled dark blue glas. Four-sided. Painted on two sides with seated figures; on the other sides with flowers in natural colours. Persian. 17th or 18th century. The silver mounting of the neck is European. H. $4\frac{1}{4}$ in., W. $2\frac{1}{4}$ in. (Marryat Collection.) 1*l.* 10*s.*

15. '67.

BOTTLE. Enamelled dark blue glas. Four-sided. Painted on one side with a standing female figure; on another with a seated male figure; and on the two remaining sides with flowers in natural colours. Persian. 17th or 18th century. The silver mounting of the neck is European. H. $5\frac{1}{4}$ in., W. $2\frac{1}{4}$ in. (Marryat Collection.) 1*l.* 10*s.*

16. '67.

BOTTLE. Enamelled green glaſs. Four-sided. Painted on two ſides with female figures; on the other ſides with flowers in natural colours. Perſian. 17th or 18th century. The ſilver mounting of the neck is European. H. $5\frac{1}{4}$ in., W. $2\frac{1}{2}$ in. (Marryat Collection.) 1*l.* 10*s.*

17. '67.

BOTTLE. Enamelled clear glaſs. Gilt. Four-sided. Painted on one ſide with figures of a man and a fawn; on another with muſicians. The other ſides apparently intended for inſcriptions. Perſian. 17th or 18th century. The ſilver mounting of the neck is European. H. $5\frac{1}{4}$ in., W. $2\frac{1}{2}$ in. (Marryat Collection.) 1*l.* 10*s.*

585. '74.

BOTTLE. Plain glaſs, with long tapering neck. Rhodian. 16th century (?). H. $7\frac{1}{8}$ in., diam. $3\frac{3}{8}$ in. Given by Rev. Greville J. Cheſter.

586. '74.

BOTTLE. Yellowiſh glaſs, with long tapering neck. Rhodian. 16th century (?). H. $9\frac{7}{8}$ in. 1*l.*

587. '74.

BOTTLE. Plain glaſs ſtreaked with red, with long tapering neck. Rhodian. 16th century (?). H. $9\frac{5}{8}$ in., diam. $3\frac{3}{8}$ in. 1*l.*

588. '74.

BOTTLE. Red ſtreaked glaſs, with long tapering neck.
Rhodian. 16th century (?). H. 9 in., diam. $3\frac{3}{8}$ in. 1/.

589. '74.

BOTTLE. Claret-coloured glaſs, with long tapering neck.
Rhodian. 16th century (?). H. $8\frac{1}{4}$ in., diam. $3\frac{1}{4}$ in. 1/.

590. '74.

BOTTLE. Blue glaſs, with long tapering neck. Rhodian.
16th century (?). H. $8\frac{3}{4}$ in., diam. $3\frac{1}{2}$ in. 1/.

591. '74.

BOTTLE. Blue glaſs, with long tapering neck, ſpirally
twiſted. Rhodian. 16th century (?). H. $7\frac{7}{8}$ in.,
diam. $3\frac{3}{8}$ in. 1/.

592. '74.

BOTTLE. Brown glaſs, with ſhort neck. Rhodian.
16th century (?). H. $5\frac{3}{4}$ in., diam. $3\frac{3}{8}$ in. 1/.

594. '74.

BOTTLE. Yellow glaſs, with ſhort neck. Rhodian.
16th century (?). H. $6\frac{1}{2}$ in., diam. $2\frac{7}{8}$ in. 1/.

595. '74.

BOTTLE. Yellow glaſs, with ſhort neck and flattened
ſides. Rhodian. 16th century (?). H. $5\frac{1}{2}$ in., diam.
 $4\frac{3}{8}$ in. 1/.

1056. '75.

BOTTLE. Plain glass, with remains of painted ornament; bulbous body and long tapering neck. Rhodian. 16th century (?). H. $9\frac{3}{8}$ in., diam. $3\frac{3}{8}$ in. 1*l.* 9*s.* 6*d.*

1057. '75.

BOTTLE. Red streaked glass; bulbous body and long tapering neck. Rhodian. 16th century (?). H. 7 in., diam. $3\frac{1}{8}$ in. 1*l.* 2*s.*

1891. '55.

BOTTLE. Glass. Circular, enamelled with flowers in proper colours, silver top. Persian. H. $5\frac{1}{2}$ in., diam. $2\frac{7}{8}$ in. (Bernal Collection.) 4*l.* 12*s.* 6*d.*

2421. '76.

BOTTLE. Plain glass, the body somewhat pear-shaped, moulded in relief with gadroons, and with a band of ornament like pine cones or cypress trees, separated by a double row of dots; long straight neck, spirally twisted, ending in a wide round mouth; baluster stem, and plain foot. Acquired in Persia. H. $15\frac{3}{4}$ in., diam. $5\frac{1}{8}$ in. 10*s.*

This bottle and the following ten bear considerable resemblance in the character of the glass and of the manufacture to the products of the Venetian glass-houses of the 17th century, and those with round mouths have the same form as one which may be seen in the plate in Chardin's *Travels in Persia*, which represents the interior of the Shah's drinking hall at Ispahan. In such bottles, according to that author, wine was commonly brought to table, the bottle being sealed. The form of the mouth is one well adapted to receive a seal. As Chardin informs us that glass was made specially at Shiraz by those who had been instructed by

an Italian about 1590, theſe bottles might very reaſonably be ſuppoſed to be examples of the 17th century ; but it is ſtated on excellent authority that precifely ſimilar bottles are made in Perſia at the preſent day, and it is obviously much more probable that ſuch ſlight and fragile veſſels ſhould be modern than that they ſhould be two centuries old.

2422. '76.

BOTTLE. Plain glaſs, the body ſomewhat pear-shaped, moulded in relief with gadroons, and with a band of ornaments like cypreſs trees or pine cones, ſeparated by a double row of dots ; long curved neck, ſpirally twiſted, ending in an upturned mouth, narrowed at the top as a ſpout ; baluſter ſtem, and plain round foot. Acquired in Perſia. H. $16\frac{7}{8}$ in., diam. 5 in. 10s.

Theſe bottles with narrow mouths were evidently ſo formed in order that a thin ſtream of liquid might be poured from them ; they may ſerve as veſſels from which wine or water may be poured into the mouth without contact with the lips, or poſſibly as oil veſſels from which the ſmall glaſs cups of lamps could be conveniently filled.

2423. '76.

BOTTLE. Greeniſh glaſs, with plain pear-shaped body, long curved neck, ſpirally twiſted, ending in an upturned mouth, pinched in the middle and narrowed at the top as a ſpout ; plain rim foot. Acquired in Perſia. H. $14\frac{5}{8}$ in., diam. $4\frac{5}{8}$ in. 6s.

2424. '76.

BOTTLE. Blue glaſs, with pear-shaped body, the upper part ſpirally twiſted ; long curved neck, ſpirally twiſted, partly flattened, and ending in an upturned mouth, narrowed at the top as a ſpout ; plain rim foot. Acquired in Perſia. H. $13\frac{1}{4}$ in., diam. $4\frac{5}{8}$ in. 6s.

2425. '76.

BOTTLE. Blue glass, with pear-shaped body, the upper part spirally twisted; long curved neck, spirally twisted, ending in an upturned mouth, narrow at the top as a spout; plain rim foot. Acquired in Persia. H. $12\frac{5}{8}$ in., diam. $4\frac{1}{2}$ in. 6s.

2426. '76.

BOTTLE. Blue glass, with pear-shaped body, and long curved neck, spirally twisted, partly flattened, and ending in an upturned mouth, narrowed at the top as a spout; plain rim foot. Acquired in Persia. H. $12\frac{3}{8}$ in., diam. $4\frac{1}{4}$ in. 6s.

2427. '76.

BOTTLE. Blue glass, with pear-shaped body, and long curved neck, spirally twisted, partly flattened, and ending in an upturned mouth, narrowed at the top as a spout; plain rim foot. Acquired in Persia. H. $12\frac{1}{4}$ in., diam. $3\frac{5}{8}$ in. 6s.

2428. '76.

BOTTLE. Blue glass, with pear-shaped body, and long curved neck, spirally twisted, partly flattened, and ending in an upturned mouth, narrowed at the top as a spout; plain rim foot. Acquired in Persia. H. $11\frac{5}{8}$ in., diam. $4\frac{1}{2}$ in. 6s.

2429. '76.

BOTTLE. Blue glass, with pear-shaped body, and long curved neck, spirally twisted, partly flattened, and end-

ing in an upturned mouth, narrowed at the top as a ſpout; plain rim foot. Acquired in Perſia. H. $11\frac{7}{8}$ in., diam. $4\frac{1}{4}$ in. 6s.

2430. '76.

BOTTLE. Blue glaſs, with pear-shaped body, and long curved neck, ſpirally twiſted, partly flattened, and ending in an upturned mouth, narrowed at the top as a ſpout; plain rim foot. Acquired in Perſia. H. 11 in., diam. $4\frac{3}{8}$ in. 6s.

2431. '76.

BOTTLE. Blue glaſs, with pear-shaped body, long ſtraight neck, ſpirally twiſted, and ending in a wide round mouth, and plain rim foot. Acquired in Perſia. H. $10\frac{5}{8}$ in., diam. $4\frac{1}{2}$ in. 6s.

1539. '76.

BOTTLE. Blue glaſs, the mouth rimmed with white. Perſian. H. $4\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. 8s.

1532. '76.

BOTTLE. Purpliſh-brown glaſs, ſquare, with moulded foliage and birds, on the ſides a diaper pattern. Perſian. H. $9\frac{1}{4}$ in., W. $3\frac{3}{4}$ in. 6s.

1533. '76.

BOTTLE. Glaſs, ſquare, with white enamelled ſpiral lines. Perſian. H. $7\frac{5}{8}$ in., W. $3\frac{1}{4}$ in. 6s.

1534. '76.

BOTTLE. Blue glaſs, ribbed with white and red. Perfian.
H. $6\frac{1}{2}$ in., W. $2\frac{3}{4}$ in. 6s.

1535, 1535a. '76.

BOWL and Saucer. Amber-coloured glaſs, with white
rims. Perfian. Bowl, H. $4\frac{3}{8}$ in., diam. $5\frac{1}{2}$ in.; faucer,
diam. $7\frac{1}{2}$ in. 1l. 5s.

1536, 1536a. '76.

BOWL and Saucer. Blue glaſs, with white rims. Perfian.
Bowl, H. $3\frac{3}{8}$ in., diam. $5\frac{7}{8}$ in.; faucer, diam. $7\frac{3}{8}$ in.
1l.

1540. '76.

CROOK. Green glaſs, ſpirally ribbed. Perfian. L. 3 ft.
6 in. 4s.

474. '75.

COIN or Weight. Yellowiſh glaſs, ſtamped with Cufic
characters. Egypto-Arab. Diam. 1 in. Given by
Rev. Greville J. Cheſter.

The inſcription has been read and tranſlated by Señor Riano as
follows :—

عمل عمر *i.e.*, The work of Omar.

475. '75.

COIN or Weight. Green glaſs, ſtamped with Cufic
characters. Egypto-Arab. Diam. $1\frac{1}{16}$ in. Given by
Rev. Greville J. Cheſter.

The inſcription has been read and tranſlated by Señor Riano as follows :—

الامام معد ابو	The Imam Moad Abu.
تميم المستنصر	Temim El Moſtanſer.
بالله امير المؤمنين	Billah, Prince of the Believers.
	(Khalif in Egypt, A.D. 1036–1094.)

476. '75.

C OIN or Weight. Green glaſs, ſtamped on both ſides with Cufic characters. Egypto-Arab. $\frac{7}{8}$ in. by $\frac{5}{8}$ in. Given by Rev. Greville J. Cheſter.

The inſcription has been read as far as legible, and tranſlated by Señor Riano as follows :—

الامام الحاكم	- -	The Imam El Hākim.
		(Khalif in Egypt, A.D. 996–1021.)

584. '74.

C UP Stand or Drinking Glaſs. Bluish glaſs, bulb-ſhape. Rhodian. 16th century. H. 6 in. Given by Rev. Greville J. Cheſter.

2432. '76.

F I G U R E of a Mouſe (?). Dark amber glaſs. Venetian or Perſian. L. about $10\frac{1}{2}$ in. 4s.

583. '74.

F L A S K. Smoke-coloured glaſs, flat. Rhodian. 16th century. H. $9\frac{1}{8}$ in., W. $4\frac{1}{4}$ in. Given by Rev. Greville J. Cheſter.

1541. '76.

G L A S S. Nine fragments, of various colours. Found in the ruins of the city of Rhages. Ancient Perſian. Given by Mons. Richard.

6820. '60.

LAMP (for suspension). Glafs. Enamelled in colours and gilt, and with Arabic infcriptions in enamel. Originally hung in a mosque at Cairo. Arabian. Not later than the 14th century. H. $10\frac{1}{4}$ in., diam. $6\frac{3}{8}$ in. 200/.

It has three loops for suspension, and is very richly decorated with coloured enamels and gilding, the latter is very much better preserved in this than in the other examples.

The ornament appears to have been traced in fine lines of red enamel, and the spaces between the lines filled in some cases with coloured enamels, in others with gilding. The whole work is carelessly executed, but very effective. On the neck is a broad band in which are three inscriptions in blue on a ground of gold, these are divided by three medallions, the centres of which are occupied by a sixfoil flower on a red ground. Such devices would appear to have some analogy with European coats of arms, and have been met with on many objects which were made in Egypt.

On the body of the vase are three inscriptions, originally gilt on a blue ground, separated by the loops for suspension.

On the under side of the body the devices in medallions are repeated, separated by floral ornament, chiefly gilt on a blue ground; on the foot are three twelve-foiled medallions in blue, in which are arabesques in blue, white, yellow, green, and red, on a gilt ground.

The glafs, as in all these lamps, is badly made, full of bubbles, of a smoky tinge, and rather horny texture.

Mr. Stanley Lane Poole, of Corpus Christi College, Oxford, has examined the Arabic inscriptions on this and the other two lamps, and furnishes the following transcriptions, transliterations, and translations of the inscriptions:—

“The lamp numbered in the Catalogue 6820. '60 bears on its neck the following inscription, divided into three parts by three medallions:

مما عمل راسم الجناب العالي ! لمولوى النلى

Mimmá 'amila rásim el-jenáb el-'álee el-mawlawee. . . .

“The work of [*lit.*, of what he made] the artist of the refuge, the noble, the follower

"(The word following *el-mawlawee* is evidently a proper name (with the relative termination), and may be Et-Telee, &c. ; but it is impossible at present to decide which of the possible combinations is the correct one.)

"The inscription on the body of the lamp is also divided into three parts by the loops for suspension. It runs thus :

بدر الملكى ا لصالحي عز الصارة كافر الروقى الحمد

Bedr El-melikee Es-Sâlihee 'Izz-es-Sârah, Káfoor Er-Rooke El-H.

"These are of course the names of the emeer who presented the lamp to the mosque. Es-Sâlihee shows that he was at some time a memlook or slave of El-Melik Es-Sâlih, and this is the only clue the inscriptions give as to the date of the lamp. I think, of the several kings of the name of Es-Sâlih who reigned in Egypt, we may dismiss the first, Es-Sâlih Nejin-ed-deen Ayyoob, as too early ; but among the Bahree Memlooks there were four Es-Sâlihs very near together, all reigning between the years 740 and 790 of the Hijreh, or 1342 and 1393 of our era, and I do not doubt that the emeer to whom the lamp belonged was a memlook of one of these four, especially as there was a lamp in the Loan Collection with the name of the wezier of one of these four kings on it. The date of the lamp may therefore be broadly laid down as the latter part of the fourteenth century."

1056. '69.

LAMP for a Mosque. Glasf. Ornamented with circular discs and inscriptions in white, red, and blue. Attached are three suspending chains of silver. Arabian. Probably 14th century. H. 13 in., diam. $8\frac{1}{2}$ in. (Meymar Collection.)

(See Plate VIII., Frontispiece.)

This very fine specimen resembles the preceding very closely as regards the character both of the glasf and of the ornamentation.

On the neck three medallions divide three inscriptions in blue enamel.

In the centre of the medallions is a device, a lozenge in white on a band of red, the ground of the circle being white.

On the upper part of the body are eleven sexfoil medallions formed by a blue line, the grounds within which were probably gilt. On these

are lines very carelessly sketched in red, some of which show some resemblance to the outlines of birds.

There were six loops for suspension, one is broken, between each is an inscription in blue characters with red edges, on a gilt ground.

On the under part of the body the medallions with devices are repeated, between them are spaces filled with arabesque ornament in white, red, green, yellow, and blue, on a gilt ground.

It has three cords of plaited silver wire, which unite into one at the top.

Mr. Stanley Lane Poole comments on the inscriptions on this lamp as follows:—

“The lamp numbered 1056. '69 bears on its neck an inscription (divided by three medallions) ; viz.,

فِي بَيْتِ أَذْنِ اللَّهِ أَنْ تَرْفَعُ وَيُذَكِّرُ فِيهَا اسْمُهُ يَسْبِيحُ لَهُ فِيهَا بِالْعَدْوِ

Fee buyootin adhina-lláhu an turfa'a wa-yudhkara feehá Ímuhu yuseb-bihū lahu feehá bi-l-ghudoo.

“In the houses which God hath permitted to be raised, and that his name be commemorated therein, men celebrate his praises in them morning [and evening].—Korán, xxiv. 36.

“On the body of the lamp is the following inscription (broken up into six parts by six loops) :

مِمَّا عَمِلَ رَأْسُ الْجَنَابِ الْعَالِي الْمَوْلَى الْأَمِيرِ الْكَبِيرِ الْعَدَمِي ابْنِ سَيْفٍ
أَمْعَا عِنْدَ الْوَاحِدِ الْمَلِكِي النَّاصِرِي

Mimmá 'amila rásim el-jenáb el-'álee el-mawlawee el-Emeer-el Ke-beeree *el-Bedmee* (?) ibn Seyf 'abd-el-Wáhid el-Melikee en-Náfiree.

“The work of the artist of the refuge, the noble, the follower of the great emeer, el-Bedmee (?), the son of Seyf the servant of the One, the meemlook of El-Melik En-Násir.

“There are two proper names in this inscription which I have been unable to decipher on account of the absence of diacritical points. Nor do I know who is intended by the Emeer-el-Kabeer. The title or

urname El-Melikee En-Násiree must, I think, refer to El-Melik En-Nasir Mohammad, who reigned through the greater part of the earlier half of the fourteenth century."

580. '75.

LAMP for suspension. Glasfs; the body widening downwards and the neck upwards, decorated with inscriptions in Arabic characters, and a floral diaper ornament, in enamel colours and gilding; on the neck are three medallions, on which are representations of scimitars; on the body are six loops for suspension. Described as having been brought from the Mosque Devi Sâidenaya, Cairo, but no such edifice would appear to be known to some well acquainted with that city. Near Damascus is a convent (?) called Deir Sâidenaya. Arab. 14th century. H. $11\frac{3}{8}$ in., diam. 10 in. 1667.

This is rather better and more carefully made than the others, and the enamel is in excellent preservation.

On the neck three inscriptions in gold on a blue ground alternate with three medallions; the device in the centre of these has a red ground, a gilt band, and upon it what appears to be intended to represent a sabre in white and black enamel.

On the body are six loops for suspension, and between each an inscription in blue on a gold ground. On the lower part of the body the medallions are repeated, the spaces between are filled with arabesque ornament, in the centres blue enamel on a gold ground, on the sides lines of red on gold, and three small ornaments in white, blue, red, and green enamel.

Mr. Stanley Lane Poole comments on the inscriptions on this lamp as follows:—

"The lamp numbered 580. '75 has the following neck inscription (divided by three medallions):

إِنَّمَا يَعْمُرُ مَسَاجِدَ اللَّهِ مِنْ آمَنِ بِاللَّهِ وَالْيَوْمِ الْآخِرِ وَأَقَامَ الصَّلَاةَ

Innamâ ya'muru mešâjida-llâhi men âmana bi-llâhi wa-l-yômi-l-âkhiri wa-akâm a-s-Salâh.

"He only shall visit the mosques of God who believeth in God and in the last day and payeth the alms.—Korán, ix. 18.

"On the body of the lamp is the inscription (divided by six loops):

هذا ما اوقفه العبد الفقيرى تعالى الله الر الكر يم قحليس
الملكى الناصرى

Hádhá má awka₂fahu el-'abd-el-fakeeree ta'āla-lláh el-Kereem Kaḥlees El-Melikee En-Násiree.

"This is what El-'Abd-El-Fakeeree made. Blessed be God, the beneficent. Kaḥlees (?), the memlook of El-Melik En-Násir.

"This lamp is probably of about the same date as the preceding, for both were in the possession of memlooks of El-Melik En Násir, unless they were memlooks of two several kings bearing the same name, which is just possible."

581. '75.

VESSEL for Oil. For placing inside a glass lamp. Green glass, partly gilt. It has three irregular-shaped handles for hooks. Arab. 14th century. H. $6\frac{1}{2}$ in., diam. $5\frac{1}{4}$ in. 7l. 6s. 6d.

This was bought with the lamp which precedes, and may probably be the vessel which belonged to it.

2108. '55.

SCENT Bottle. Semi-opaque pale blue glass. Mounted in silver-gilt filigree work, bulb-shaped. Turkish or Persian. H. $7\frac{1}{2}$ in., diam. 3 in. (Bernal Collection.) 7l. 10s.

1537. '76.

SCENT Bottle. Pale blue opaque glass. Persian. 17th century. H. $8\frac{1}{4}$ in., diam. $3\frac{3}{8}$ in. 9s.

1538. '76.

SCENT Bottle. Opaque glaſs, imitation of jade, with wings of pinched work. Perſian. 2 in. by $1\frac{3}{4}$ in. 2s.

593. '74.

VASE. Yellow glaſs, with wide mouth. Rhodian. 16th century (?). H. $6\frac{1}{4}$ in., diam. $2\frac{7}{8}$ in. 1l.

1058. '75.

VASE. Blue glaſs, with long neck and wide mouth. Rhodian. 16th century (?). H. $6\frac{5}{8}$ in., diam. $3\frac{1}{2}$ in. 1l. 2s.

PLATE IX.



BEAKER.

Venetian, 16th century.

(5954. '58.)



SECTION IV.—GLASS OF VENICE AND OTHER
ITALIAN STATES.

848. '64.



EAD. Blue glass. With white enamel ornament. Venetian (?). 18th century. L. $\frac{3}{8}$ in. Given by the Rev. R. Brooke.

7539. '61.

BEAKER. Enamelled glass. Ornamented with tritons supporting scrollwork, surmounted by spread eagles in colours. Venetian. 1490–1520. H. 5 in., diam. $3\frac{3}{4}$ in. 5/.

5954. '58.

BEAKER and Cover. Clear glass. With transverse fillets in opaque white glass, decorated with six masks in moulded and gilt glass, standing on three gilt feet. Venetian. Early 16th century. H. 8 in., diam. $3\frac{1}{4}$ in. 10/.

(See Plate IX.)

18. '67.

BEAKER and Cover. Clear glass. Enamelled with two shields of arms, one barry argent and gules, the other

argent, a lion rampant gules; a gilt and jewelled band round the lip. The cover of ſcale pattern gilt, and jewelled in enamel. Venetian. About 1550. H. $8\frac{1}{2}$ in., diam. $4\frac{1}{4}$ in. (Marryat Collection.) 6*l*.

407. '54.

BEAKER. Glaſs. With alternating columns of latticinio and gold avanturine. Venetian. 18th century. H. 6 in., diam. 4 in. 18*l*.

408. '54.

BEAKER. Froſted or crackle glaſs; margin gilt, three lions' heads gilt, alternating with ſmall boſſes round the middle. Venetian. 17th century. H. $11\frac{1}{2}$ in., diam. $7\frac{3}{8}$ in. 14*l*.

1883. '55.

BEAKER. Clear glaſs, with bands of reticulated latticinio. Venetian. 17th century. H. $11\frac{1}{2}$ in., diam. $4\frac{1}{2}$ in. (Bernal Collection.) 1*l*. 11*s*. 6*d*.

1912. '55.

BEAKER with Cover. Lace-work glaſs, "vitro di trina," reticulated, a ſmall bubble of air enclosed in each interſection. Venetian. 17th century. H. $13\frac{1}{4}$ in., diam. $4\frac{5}{8}$ in. (Bernal Collection.) 5*l*. 10*s*.

1820. '55.

BEAKER. Clear glaſs. With vertical columns of filigree latticinio work. Venetian. 16th century. H. $6\frac{1}{2}$ in., diam. $4\frac{5}{8}$ in. (Bernal Collection.) 1*l*.

1821. '55.

BEAKER. Glafs. Enriched with bands of latticinio arranged spirally. Venetian. 16th or 17th century. H. $7\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 1*l.* 4*s.*

1822*a.* '55.

BEAKER or Tumbler. Glafs. Vertical columns of pale ruby alternately with yellow and white filigree. Venetian. 16th or 17th century. H. $3\frac{1}{2}$ in., diam. $3\frac{1}{8}$ in. (Bernal Collection.) 14*s.*

1822*b.* '55.

BEAKER or Tumbler. Glafs. Vertical columns of pink, blue, and white latticinio filigree work. Venetian. 16th or 17th century. H. $3\frac{3}{4}$ in., diam. 3 in. (Bernal Collection.) 14*s.*

1864. '55.

BEAKER. Glafs. With blue, white, and red oblique spiral stripes. Venetian. 16th or 17th century. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 4*l.* 10*s.*

1886. '55.

BEAKER. Lace-work glafs, "vitro di trina, a reticelli," *i.e.* intersecting. Cylindrical. Venetian. 16th century. H. 3 in., diam. $2\frac{5}{8}$ in. (Bernal Collection.) 1*l.* 10*s.*

1887. '55.

BEAKER. Lace-work glafs, "vitro di trina." Venetian. 16th century. H. 5 in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 2*l.* 15*s.*

4066. '56.

BEAKER. Clear glaſs. Supported on three ball feet, and ſurrounded with raiſed ſpiral fillets of white and blue glaſs. Venetian. 16th century. H. $3\frac{1}{2}$ in., diam. 3 in. 1*l.* 4*s.*

4394. '57.

BEAKER. Glaſs. Of a blackiſh tint, a tall cylindrical veſſel, raiſed on a hollow foot of about $1\frac{1}{2}$ inch; ſtudded with ſquare boſſes in relief, ſeparated by vertical lines of gilding on which are dots of white enamel, round the lips are two lines of white dots bordering a gilt line. On one of the boſſes near the bottom is a character in white enamel, apparently the Hebrew Samech reverſed. Italian (Venetian?). 16th century. H. $13\frac{3}{8}$ in., diam. $4\frac{5}{8}$ in. 6*l.*

9013. '63.

BELL. Clear glaſs; with bows and flower at top; the clapper of ſilver filigree work. Venetian. 16th century. H. $5\frac{1}{2}$ in., diam. 4 in. 1*l.* 7*s.* 9*d.*

270. '74.

BOTTLE. Blue enamelled glaſs, double-bodied and ribbed. Venetian. 15th or 16th century. H. $1\frac{3}{4}$ in., diam. $1\frac{3}{8}$ in. (Webb Collection.) 20*l.*

268. '74.

BOTTLE. Variegated glaſs, ſquare. Venetian. 15th or 16th century. H. 4 in., $1\frac{7}{8}$ in. ſquare. (Webb Collection.) 10*l.*

1624. '54.

BOTTLE. Pale green glafs. Bulb-shaped, with two handles. Venetian. 16th or 17th century. H. $7\frac{1}{2}$ in., diam. $4\frac{3}{8}$ in. 15s.

1823. '55.

BOTTLE and Cover. Lace-work glafs, "vitro di trina;" cylindrical. Venetian. 16th or 17th century. H. $6\frac{1}{2}$ in., diam. $1\frac{3}{4}$ in. (Bernal Collection.) 10s. 6d.

1831. '55.

BOTTLE. Semi-opaque sprinkled glafs. Barrel-shaped, with bosses of blue glafs. Venetian. 16th or 17th century. L. $4\frac{1}{4}$ in., W. 3 in. by $2\frac{1}{2}$ in. (Bernal Collection.) 3l. 3s.

1863. '55.

BOTTLE. Clear glafs. With vertical flutings and transverse bands of blue and white glafs; square. Venetian. 16th century. H. $5\frac{1}{2}$ in., W. $3\frac{3}{8}$ in. (Bernal Collection.) 1l. 1s.

1893. '55.

BOTTLE, with Handle. Brown glafs. Globular. Venetian. 16th century. H. 7 in., diam. $3\frac{1}{2}$ in. (Bernal Collection.) 9l. 10s.

1913. '55.

BOTTLE. Lace-work glafs, "vitro di trina;" oviform; a band of animals in relief round the centre, mounted on open-work ormoulu stem. Venetian. 16th or 17th century. H. 10 in., diam. $3\frac{1}{4}$ in. (Bernal Collection.) 5l.

1913*a*. '55.

BOTTLE. Lace-work glaſs, "vitro di trina," in bars of various colours; ſquare. Venetian. 16th century. H. $4\frac{3}{4}$ in., W. 4 in. (Bernal Collection.) 1*l*. 13*s*.

2435. '56.

BOTTLE. Clear glaſs, with moulded appliqué boſſes and lion's head maſks in clear blue and red. 17th century. H. $6\frac{1}{8}$ in., W. $5\frac{3}{4}$ in. by $2\frac{5}{8}$ in. 1*l*. 4*s*.

The body is flattened with a ſmall perforation in the centre, it is very thick and clumsy, and the maſks are very ill-formed. It may very poſſibly be an example of the attempts made to copy Venetian glaſs in England or elſewhere, and not really of Venetian origin.

4629. '58.

BOTTLE or Flower Holder. Purple glaſs. Venetian. 16th century. H. 5 in., diam. $3\frac{1}{4}$ in. 15*s*.

566. '53.

BOTTLE. Opaque white glaſs. Ornamented in blue. Venetian. 17th century. H. $5\frac{3}{4}$ in., diam. $2\frac{5}{8}$ in. (Bandinel Collection.)

569. '53.

BOTTLE. Clear glaſs. Bulb-shaped, with vertical columns of waved latticinio. Venetian. 17th century. H. $6\frac{1}{8}$ in., diam. 3 in. (Bandinel Collection.)

1871. '55.

BOTTLE. Dark purple glaſs. The ſurface froſted; fluted. Venetian. 17th century. H. $7\frac{3}{4}$ in., diam. $5\frac{1}{8}$ in. (Bernal Collection.) 5*l*. 5*s*.

1903^h. '55.

BOTTLE. Schmelz aventurine glafs. Bulb-shaped. Venetian. 18th century. H. $2\frac{1}{8}$ in., diam. 3 in. (the neck broken off). (Bernal Collection.) 1*l*.

3657. '56.

BOTTLE. Glafs. Blue ground, with splashes of gold aventurine. Venetian. 18th century. H. $3\frac{3}{8}$ in., diam. $1\frac{3}{4}$ in. 1*l*. 11*s*. 6*d*.

5517. '59.

BOTTLE. Blue glafs. Elliptic, with oblique pattern in laticinio, and raised ribs and bosses in opaque white glafs. Venetian. 17th century. H. 3 in., W. $1\frac{7}{8}$ in. by $1\frac{5}{8}$ in. (Soulages Collection.) 2*l*.

5518. '59.

BOTTLE. Millefiore glafs. Bulb-shaped. Venetian. 17th century. H. $3\frac{3}{4}$ in., diam. $2\frac{5}{8}$ in. (Soulages Collection.) 2*l*.

1273. '72.

BOTTLE. Plain glafs, round, with flattened sides. On the centre of each side is a boss like a raspberry, from which ridges, more or less raised, radiate towards the circumference, and are decorated with yellow dots. Each ridge is

capped at the circumference with a raised band of plain or yellow glaſs. Italian (Venetian?). 17th century. Diam. $3\frac{7}{8}$ in. 1*l*.

4319. '58.

BOWL Tazza. Opaque. Turquoise blue glaſs, ſurrounded by a wide band of gilt and enamelled imbricated work. The under part of the tazza decorated with a pattern of interlacing ribbons and foliated work in red, yellow, and black, the foot ſurrounded by enamel white moulding. Venetian. About 1490. H. 6 in., diam. 9 in. 9*l*. 13*s*.

1819. '55.

BOWL. Glaſs. With oblique radiating ſtripes of red and white glaſs. Venetian. 16th or 17th century. H. 2 in., diam. $4\frac{1}{2}$ in. (Bernal Collection.) 1*l*. 10*s*.

2463. '56.

BOWL or Tazza. Clear glaſs. With gilt ſpiral gadroons on the lower part of the bowl; the margin ſurrounded with a gilt zone, ſtudded with ſpots of blue and white in enamel. Venetian. Early 16th century. H. $5\frac{3}{4}$ in., diam. $10\frac{3}{8}$ in. 5*l*. 17*s*. 7*d*.

5487. '59.

BOWL. With two rings of blue glaſs enclosing a band ſprinkled with gold. Glaſs. Venetian. Firſt half of 16th century. H. $1\frac{7}{8}$ in., diam. $5\frac{3}{4}$ in. (Soulages Collection.) 5*l*. 10*s*.

5494. '59.

BOWL. Glafs. With blue and white enamel and gilding. Venetian. 16th century. H. $2\frac{1}{4}$ in., diam. $6\frac{1}{4}$ in. (Soulages Collection.) 5*l.* 10*s.*

5492. '59.

BOWL. Glafs. Enamelled with scale pattern and partially gilt. Venetian. Early 16th century. H. 6 in., diam. 10 in. (Soulages Collection.) 5*l.* 10*s.*

5502. '59.

BOWL. Glafs, with spots of blue and white enamel on a gilt ground. Venetian. First half of 16th century. H. $2\frac{3}{4}$ in., diam. $7\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5574. '59.

BOWL or Bafin. "Schmelz" or semi-opaque mottled glafs. Venetian. 16th century. H. $4\frac{1}{2}$ in., diam. 12 in. (Soulages Collection.) 3*l.*

A very fine example of Schmelz.

1219. '64.

BOWL or Bafin. Opalized glafs. Splashed with dark blue. Venetian or Flemish. 18th century. Diam. $6\frac{1}{2}$ in. Given by Mr. Sedgwick.

910. '64.

BOX. Minute bead work. White ground, coloured floral pattern. Venetian. 18th century. H. $1\frac{1}{4}$ in., L. $2\frac{1}{2}$ in., W. $1\frac{5}{8}$ in. Given by the Rev. R. Brooke.

398. '72.

CAMEO. Red, opaque glaſs, moulded in relief with part of a battle ſcene, probably a caſt from a carving in ivory; oblong. Italian. 18th century. H. $4\frac{1}{8}$ in., W. $1\frac{1}{8}$ in. (Webb Collection.) 15/.

5576. '59.

CHANDELIER. Clear glaſs. Pendent, with ſockets for twelve lights, ornamented with roſettes or flowers in coloured glaſs. Venetian. 17th or 18th century. H. 5 ft. 6 in., W. 3 ft. 2 in. (Soulages Collection.) 50/.

5946. '59.

CHANDELIER. Clear glaſs. Pendent, with ſconces to hold eight lights. Venetian. 17th or 18th century. H. 3 ft. 9 in., W. 2 ft. 6 in. 16/.

93. '53.

CRUET. Pale green glaſs. With waves of latticinio. Venetian. 16th century. H. 7 in., diam. $4\frac{1}{4}$ in. by $3\frac{1}{4}$ in. 10s.

568. '53.

CRUET. Clear glaſs. With a waved pattern in latticinio, and with blue handle and borders. Venetian. 16th or 17th century. H. 6 in., W. $3\frac{3}{4}$ in. (Bandinel Collection.)

1825, 1825a. '55.

CRUETS (a pair). Opal glaſs. Venetian. 16th or 17th century. H. $3\frac{3}{4}$ in., W. 3 in. (Bernal Collection.) 8/ 15s.

1895. '55.

CRUET. Glafs. Blue ground, marbled with opaque white, green, and red, with handle, fpout, and raifed boffes in blue. Venetian. 16th century. H. $5\frac{1}{4}$ in., W. $4\frac{3}{8}$ in. by $3\frac{1}{4}$ in. (Bernal Collection.) 6*l.* 10*s.*

2464. '56.

CRUET. Clear glafs. With fpout and handle, decorated with appliqué boffes of green glafs, and masks of clear glafs gilt, and yellow and red bands. Venetian. 16th century. H. $4\frac{1}{2}$ in., W. 3 in. 2*l.* 3*s.* 3*d.*

1914*a.* '55.

CRUET or Ewer. With fpout and handle. Lace-work glafs, "vitro di trina." Venetian. 17th century. H. $4\frac{1}{2}$ in., W. $3\frac{1}{2}$ in. by $2\frac{1}{2}$ in. (Bernal Collection.) 3*l.* 15*s.*

1890. '55.

CUP. Clear glafs, with rings and flame-like ornaments in gilding, and spots of various coloured enamels, imitating pearls and precious ftones. Venetian. H. $4\frac{1}{4}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 9*l.* 5*s.*

410. '54.

CUP. Purple glafs. Globular, with chafed filver cover, the cup furrounded with a band or fringe of foliated ornament in white enamel. Venetian. About 1500-20. H. $4\frac{1}{8}$ in., diam. $4\frac{1}{2}$ in. 12*l.*

19. '67.

CUP or Vafe. Green glafs. Elliptic, mounted in gilt metal, with two ferpent handles. Venetian. About

1560 (?). H. 6 in., L. 9 in., W. $5\frac{1}{2}$ in. Much broken.
(Marryat Collection.) 1*l.*

20. '67.

CUP or Vaſe. Schmelz avanturine glaſs. Elliptic.
Mounted in gilt metal. Venetian. H. $3\frac{1}{2}$ in., L. 5 in.,
W. 4 in. (Marryat Collection.) 2*l.* 10*s.*

1808. '55.

CUP or Beaker. Glaſs. Cylindrical, with tranſverſe fillets,
involute handles, and lion's head marks in moulded
glaſs. Venetian. 16th or 17th century. H. 3 in., W. 4 in.
by $2\frac{1}{2}$ in. (Bernal Collection.) 2*l.* 15*s.*

1827. '55.

CUP. Brown opaque glaſs. Sprinkled with colours in
imitation of porphyry, and gold avanturine. Venetian.
18th century. H. $2\frac{1}{8}$ in., W. $1\frac{3}{8}$ in. (Bernal Collection.) 3*l.*

1872. '55.

CUP. Ruby glaſs. Fluted, mounted on metal ſtand.
Venetian (?) 16th century. H. $2\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in.
(Bernal Collection.) 2*l.* 12*s.* 6*d.*

1872*a.* '55.

CUP. Ruby glaſs. Engraved with feſtoons of flowers;
the foot mounted in metal. Venetian (?). 16th century.
H. $2\frac{1}{2}$ in., diam. 2 in. (Bernal Collection.) 2*l.* 12*s.* 6*d.*

1910. '55.

CUP. Millefiore glaſs. Venetian. 16th century. H.
 $1\frac{3}{4}$ in., diam. $3\frac{1}{2}$ in. (Bernal Collection.) 7*l.*

1914. '55.

CUP, with Cover. Greenish-white glass. With vertical columns of lace-work glass. Venetian. 16th century. H. 14 in., diam. $4\frac{1}{8}$ in. (Bernal Collection.) 5*l*.

3655. '55.

CUP (two-handled). Semi-opaque white glass. Venetian. 16th century. H. $1\frac{5}{8}$ in., W. $4\frac{1}{2}$ in. by $3\frac{7}{8}$ in. 2*l*. 10*s*.

1888. '55.

CUP and Cover. Lace-work glass, "vitro di trina;" cylindrical. Venetian. 17th century. H. $8\frac{1}{2}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 3*l*. 13*s*. 6*d*.

(See Plate XVI., fig. 3, p. 80.)

1889. '55.

CUP or Hanap, with Cover. Lace-work glass, "vitro di trina" intersecting. Venetian. 17th century. H. $10\frac{1}{2}$ in., diam. $3\frac{5}{8}$ in. (Bernal Collection.) 9*l*. 10*s*.

72, 72a. '53.

CUP (two-handled) and Tazza or stand. Lace-work glass, "vitro di trina." Venetian. 17th century. Cup, H. $2\frac{7}{8}$ in., W. 6 in. by $4\frac{7}{8}$ in. Tazza, H. $1\frac{1}{4}$ in., diam. $8\frac{1}{2}$ in. 7*l*. 7*s*.

419. '54.

CUP. Clear glass. Sprinkled with variegated colours. Venetian. 18th century. H. $2\frac{3}{4}$ in., diam. $3\frac{7}{8}$ in. 2*l*.

2996. '56.

DISH or Tazza. Clear glaſs. In the centre an enamelled eſcutcheon of arms, ſurrounded by radiating embossed gadroons; imbricated margin in gold. Venetian. About 1500. H. $2\frac{1}{8}$ in., diam. $11\frac{3}{8}$ in. 4*l.* 16*s.*

4067. '56.

DISH or Tazza. Clear glaſs. With raised ſpiral fillets of blue glaſs. Venetian. 16th century. Diam. $16\frac{3}{4}$ in. 1*l.* 4*s.*

1824. '55.

DRINKING Glaſs. Lace-work glaſs, or "vitro di trina." Bell-shaped, without ſtem; mounted in ſilver. Venetian. 16th century. H. $7\frac{5}{8}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 2*l.* 2*s.*

1856. '55.

DRINKING Glaſs. Moulded reticulated ſurface, with ſilver mounting; to which is attached a ſmall bell. Venetian. About 1550-1600. H. $7\frac{1}{4}$ in., diam. 4 in. (Bernal Collection.) 2*l.* 10*s.*

1885. '55.

DRINKING Glaſs. Lace-work glaſs, "vitro di trina." With embossed bowl. Venetian. 16th century. H. $5\frac{3}{4}$ in., diam. $3\frac{3}{8}$ in. (Bernal Collection.) 4*l.* 10*s.*

1814. '55.

DRINKING Glaſs. Bell-shaped. Clear glaſs, with vertical columns of latticinio work; lower part of bowl ornamented with cluſtered bulbs. Venetian. 17th century. H. $5\frac{3}{4}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 4*l.*



Vincent Brooks, Dry & Son, Ltd.

EWER.

Venetian, 15th Century. (273-74.)

1822. '55.

DRINKING Glaſs. Spiral bands of white latticinio alternating with blue ſtripes. Venetian. 17th century. H. 5 in., diam. $3\frac{3}{8}$ in. (Bernal Collection.) 14s.

273. '74.

EWER. Blue glaſs, painted in enamel with flowers and figures of Tritons and Nereids. Venetian. 16th century. H. 8 in., diam. 5 in. (Webb Collection.) 60l.
(See Plate X.)

241. '53.

EWER. Clear ribbed glaſs. Venetian. 16th century. H. $9\frac{1}{2}$ in., W. $5\frac{3}{4}$ in. by $4\frac{3}{8}$ in. 2l. 5s.

567. '53.

EWER. Opaque white and blue marbled glaſs. Venetian (?). 17th century. H. $5\frac{3}{4}$ in., diam. $3\frac{3}{4}$ in. (Bandinel Collection.)

1809. '55.

EWER or Burette. Clear glaſs, the foot added in bronze gilt. Venetian. 16th century. H. $5\frac{3}{4}$ in., W. 3 in. by $2\frac{1}{4}$ in. (Bernal Collection.) 7l.

1828. '55.

EWER or Burette, with ſpout and handle. "Schmelz" glaſs. Venetian. 16th century. H. 12 in., W. $7\frac{5}{8}$ in. by 6 in. (Bernal Collection.) 10l. 10s.

1832, 1832a. '55.

EWER and Bafin. Pale ſtraw-coloured froſted glaſs; the ewer with ſcroll handle. Venetian. 16th century. H. of ewer, $7\frac{1}{2}$ in., W. $8\frac{3}{4}$ in. by $4\frac{5}{8}$ in.; H. of bafin, $4\frac{3}{4}$ in. diam. 14 in. (Bernal Collection.) 16l. 5s. 6d.

Thēſe are fine examples of froſted glaſs.

1897. '55.

EWER. Miliefiore glaſs. Venetian. 16th or 17th century. H. $8\frac{1}{2}$ in., W. $4\frac{3}{8}$ in. by $3\frac{3}{4}$ in. (Bernal Collection.) 57l.

(See Plate XI.)

5515. '59.

EWER. Blue glaſs, oviform. Venetian. 16th century. H. $6\frac{1}{2}$ in., diam. $2\frac{1}{2}$ in. (Soulages Collection.) 2l.

5516. '59.

EWER. Opaque white glaſs, oviform. Venetian. 16th century. H. $5\frac{5}{8}$ in., W. $2\frac{7}{8}$ in. by $2\frac{1}{2}$ in. (Soulages Collection.) 2l.

5575. '59.

EWER. "Schmelz" or ſemi-opaque mottled glaſs. Venetian. 16th or 17th century. H. $8\frac{1}{8}$ in., W. $6\frac{1}{4}$ in. by $5\frac{3}{4}$ in. (Soulages Collection.) 5l.

2456. '56.

EWER or Flaſk, with ſpout and handle. Clear glaſs, with five roſettes in relief, in coloured glaſs, on each ſide. Venetian. 17th century. H. $12\frac{3}{4}$ in., W. 10 in. 1l. 15s.



EWER.

Venetian, 16th or 17th century.

(1897. '55.)

1851. '55.

FLASK. Enamelled glaſs, bulb-shaped, with elongated neck. On the bulb are two ſhields of arms, with interlaced arabefque work in brilliant colours; on the neck ſtripes or flutings of blue and white enamels. Venetian. About 1520. H. $8\frac{3}{4}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 33*l*.

1892. '55.

FLASK or Pilgrim's Bottle. Pale green glaſs, ſplafhed with opaque white and red glaſs; two ſmall handles of green glaſs. Venetian. 16th century. H. 9 in., W. $6\frac{1}{2}$ in. by $3\frac{1}{2}$ in. (Bernal Collection.) 27*l*.

1894. '55.

FLASK or Pilgrim's Bottle. Blue glaſs, flat-fided, ſprinkled with gold avanturine. Venetian. 16th or 17th century. H. $10\frac{1}{2}$ in., W. 6 in. by $2\frac{1}{2}$ in. (Bernal Collection.) 21*l*.

3658. '56.

FLASK. Transparent greeniſh blue glaſs, ſplafhed with gold, red, and blue avanturine. Venetian. 16th century. H. $3\frac{1}{4}$ in., W. $2\frac{1}{2}$ in. by $1\frac{5}{8}$ in. 1*l*. 11*s*. 6*d*.

4795. '58.

FLASK. Glaſs. Blue, ſprinkled with gold avanturine. Venetian. 16th century. H. $8\frac{1}{2}$ in., W. $4\frac{3}{4}$ in.

6869. '60.

FLASK. Ruby glaſs, fluted, oviform, mounted in gilt copper, with ſtopper. Venetian. 16th century. H. $11\frac{3}{4}$ in., W. $4\frac{3}{4}$ in. by $3\frac{3}{8}$ in. 2*l.* 12*s.*

7445. '61.

FLASK. Green glaſs, mounted in gilt bronze, with chain attached. It is very thick and heavy, and is perhaps more probably of German than Venetian origin. 16th century. H. $9\frac{1}{2}$ in., W. 6 in. by $3\frac{1}{8}$ in. Given by Sir J. Hudſon, K.C.B.

77. '53.

FLOWER Glaſs or Bouquet Holder. White glaſs. Edged with green, bulb-formed foot. Venetian. 17th century. H. 9 in., diam. $3\frac{3}{8}$ in. 1*l.* 2*s.*

78. '53.

FLOWER Glaſs or Bouquet Holder. Edged with blue glaſs, bulb-formed foot. Venetian. 17th century. H. $7\frac{3}{4}$ in., diam. 3 in. 1*l.* 2*s.*

5511. '59.

FLOWER Vaſe. Moulded glaſs. The body in the ſhape of a pecten ſhell, with funnel-shaped neck and two ſcroll handles in blue glaſs attached. Venetian. 17th century. H. $8\frac{1}{2}$ in., W. $3\frac{3}{4}$ in. by $3\frac{3}{8}$ in. (Soulages Collection.) 2*l.*

5512. '59.

FLOWER Vaſe. Moulded glaſs. The body in the ſhape of a pecten ſhell, with funnel-shaped neck, and

two scroll handles in blue glass attached. Venetian. 17th century. H. $8\frac{1}{2}$ in., W. 4 in. by $3\frac{1}{4}$ in. (Soulages Collection.) 2*l*.

5513. '59.

FLOWER Vase. Moulded glass. The body in the shape of a pecten shell, with funnel-shaped neck, and two scroll handles in blue glass attached. Venetian. 17th century. H. $8\frac{1}{2}$ in., W. $3\frac{3}{8}$ in. (Soulages Collection.) 2*l*.

75. '53.

FLOWER Glass. Clear glass. With green edgings and enrichments. Venetian. 17th or 18th century. L. $10\frac{1}{4}$ in., diam. $2\frac{3}{4}$ in. 1*l*. 2*s*.

86. '53.

FLOWER Glass. Clear glass. Bulb-shaped bowl, and involuted mounts. Venetian. 17th century. H. $7\frac{1}{4}$ in. diam. $4\frac{1}{4}$ in. 1*9s*. 7*d*.

87. '53.

FLOWER Glass. Clear glass. On low stem, the bowl compressed quadrilaterally; ornaments in blue glass on the lower part of the bowl. Venetian. 17th century. H. 6 in., diam. $4\frac{3}{4}$ in. 1*9s*. 7*d*.

100. '53.

FLOWER Glass. Balloon-shaped. With slender involuted handles. Venetian. 17th century. H. $7\frac{3}{4}$ in., diam. $2\frac{7}{8}$ in. 1*l*. 10*s*.

5523. '59.

FLOWER Vafe. Clear glaſs on bulbed and winged ſtem, and containing a blue and white flower, ſupported on a bent rod. Venetian. 16th or 17th century. H. $9\frac{1}{2}$ in., diam. $4\frac{3}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

9046. '63.

FOOT of a Vafe. Schmelz glaſs. Venetian. 18th or 19th century. Diam. $4\frac{7}{8}$ in. Given by Meſſrs. Litchfield and Radcliffe.

160. '65.

FORK. Glaſs. With twiſted and curved ſtem. Venetian. 16th century. L. $6\frac{1}{4}$ in. Given by E. Kaulbach, Eſq.

7894. '61.

FRAGMENT of a glaſs Veſſel. Etched on gold leaf, with an angel's head. Italian (?). 13th century (?). $1\frac{1}{2}$ in. by $\frac{7}{8}$ in.

266. '74.

GOBLET with Cover. Dark blue glaſs, enamelled and gilt foot and cover powdered with gold. Venetian. 15th century. H. $9\frac{1}{2}$ in., diam. $3\frac{1}{2}$ in. (Webb Collection.) 30*l.*

5505. '59.

GOBLET. Glaſs. The bowl enriched with vertical gadroons in relief and gilt; a gilt band jewelled in enamel colours near the margin; the foot fluted. Venetian.

PLATE XII.



GOBLET.

Venetian, 1480 to 1500.

(409. '54.)

1480 to 1500. H. $8\frac{1}{4}$ in., diam. $4\frac{3}{4}$ in. (Soulages Collection.) 10/.

409. '54.

GOBLET. Green glafs. Enamelled with arabesque scroll-work in gold and colours, and with profile portraits of a lady and a gentleman, in medallions, foot powdered with gold. Venetian. 1480 to 1500. H. $6\frac{3}{4}$ in., diam. $4\frac{3}{4}$ in. 30/.

(See Plate XII.)

5542. '59.

GOBLET. Glafs. Funnel-shaped, the lower part of the bowl decorated with arabesque ornament of dolphins, scroll foliage, &c. in enamel colours; the margin of the glafs enriched with gilded zones. Venetian. About 1500-1520. H. $5\frac{3}{4}$ in., diam. 4 in. (Soulages Collection.) 10/.

1909. '55.

GOBLET and Cover. Clear glafs. Fluted or puffed, stem involuted. Venetian. 15th or 16th century. H. $12\frac{5}{8}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 8/ 5s.

4259. '57.

GOBLET. Glafs. The bowl ribbed, the margin enamelled with spots of white and green enamel. Venetian. 15th century. H. 6 in., diam. 4 in. 9/ 10s.

108. '53.

GOBLET. Clear glafs. On lofty stem, ornamented with projecting stalks or branches and rosettes of opaque white and red glafs. Venetian. 16th or 17th century. H. $10\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. 7/ 10s.

7536. '61.

GOBLET. Glaſs. The ſtem blue, powdered with gold; the bowl diamond-moulded and enamelled with roſettes, &c. Venetian. Probably 15th century. H. $6\frac{1}{4}$ in., diam. $3\frac{7}{8}$ in. 8*l.* 15*s.*

1815. '55.

GOBLET. Clear glaſs; with bars or canes of latticinio work projecting in relief from the ſurface of the piece. Venetian. 16th century. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{8}$ in. (Bernal Collection.) 6*l.* 15*s.*

1818. '55.

GOBLET. Lace-work glaſs, "vitro di trina." Funnel-shaped. Venetian. 16th or 17th century. H. $6\frac{1}{2}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 2*l.* 5*s.*

1829. '55.

GOBLET or Flower Glaſs. Opal glaſs; with bell-shaped bowl and curved margin, folded over to reſemble the calyx of a flower. Venetian. 16th or 17th century. H. $7\frac{1}{4}$ in., diam. $4\frac{3}{4}$ in. (Bernal Collection.) 13*l.*

1869. '55.

GOBLET. Glaſs. Spiral fluted bowl in purple glaſs, and moulded ſtem in white. Ornamented with maſk, gadroons, garlands, &c. in relief. Venetian. 16th century. H. $6\frac{3}{4}$ in., diam. $3\frac{3}{4}$ in. (Bernal Collection.) 13*l.* 10*s.*

5507. '59.

GOBLET or Tazza. Clear glaſs. Oval or boat-shaped fluted bowl, on raiſed baluſter ſtem. Venetian. 16th

century. H. $8\frac{1}{4}$ in., W. $8\frac{1}{2}$ in. by $5\frac{1}{2}$ in. (Soulages Collection.) 5*l*.

5509. '59.

GOBLET. Clear glafs. Of grotesque form, with a syphon apparatus, surmounted with the figure of a stag in full relief. Venetian. 16th or 17th century. Goblet, H. $8\frac{1}{2}$ in., diam. $4\frac{1}{2}$ in.; stag, H. $9\frac{1}{2}$ in. (Soulages Collection.) 3*l*.

5510. '59.

GOBLET Dark blue glafs. Funnel-shaped, on low baluster stem; the bowl diamond-moulded. Venetian. First half of 16th century. H. 9 in., diam. $6\frac{3}{4}$ in. (Soulages Collection.) 6*l*.

5543. '59.

GOBLET. Clear glafs. The stem ornamented with masks; base of bowl ribbed. Venetian. 16th century. H. $6\frac{3}{4}$ in., diam. $3\frac{1}{2}$ in. (Soulages Collection.) 1*l*. 5*s*.

5564. '59.

GOBLET and Cover. Pale straw-coloured glafs. On bulbous stem. Venetian. 16th century. H. $10\frac{3}{4}$ in., diam. $3\frac{3}{4}$ in. (Soulages Collection.) 1*l*. 10*s*.

488. '53.

GOBLET and Cover. Clear glafs. Etched with Bacchanalian figures and foliage; on the cover is the figure of a swan in green glafs. Venetian. 17th or 18th century. H. $10\frac{1}{2}$ in., diam. $3\frac{3}{4}$ in. 1*l*. 11*s*. 6*d*.

1861. '55.

GROTESQUE Veſſel. Lace glaſs, or "vitro di trina," in the form of a fiſh. Venetian. 16th or 17th century. H. 5 in., L. 7 in., W. $4\frac{1}{2}$ in. (Bernal Collection.) 7*l.* 5*s.*

(See Plate XIII.)

74. '53.

GROTESQUE Veſſel. In clear glaſs, the lower part reſembling a guitar, the upper extremity formed by a ſpiral twiſted tube. Venetian. 17th century. H. $12\frac{3}{4}$ in., W. 3 in. by $2\frac{3}{4}$ in. 1*l.* 2*s.*

335. '54.

ICE-CUP and Stand, or Saucer. Glaſs. Schmelz avanturine. Venetian. 18th century. Cup. H. $3\frac{3}{8}$ in., diam. $2\frac{7}{8}$ in.; ſtand, H. $1\frac{5}{8}$ in., diam. $4\frac{1}{2}$ in. 3*l.*

1609. '55.

JUG or Cruche. Opaque red glaſs, oviform and ribbed. Venetian. 16th century. H. 7 in., diam. $4\frac{1}{8}$ in. 7*l.*

1859. '55.

JUG or Cruche, with handle. Clear glaſs, raiſed mounts, and tranſverſe bands and ornaments in blue. Venetian (?) 17th century. H. $6\frac{1}{2}$ in., W. $5\frac{1}{4}$ in. by $4\frac{3}{8}$ in. (Bernal Collection.) 6*l.* 15*s.*

This is a good example of ornament produced by pinching the glaſs while hot. It is much clumſier than Venetian glaſs uſually is, and poſſibly is really a product of one of the manufactories eſtabliſhed in the 17th century, in England, the Low Countries, and elſewhere, in rivalry of Venice.

PLATE XIII.



GROTESQUE VESSEL.
Venetian, 16th or 17th century.
(1861. '55.)

1

1870. '55.

KNOB or Ornament. Orange-coloured glass, on bulb stem, silvered in the interior. Venetian. 16th or 17th century. H. $8\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. (Bernal Collection.) 5*l.* 5*s.*

5988. '60.

LAMP (for suspension). Globe-shaped. Glazed, with small quarries in hexagonal compartments. Venetian. 16th or 17th century. 17 in. by 11 in. 1*l.* 5*s.*

1873. '55.

LIQUEUR Glass. The bowl and foot in opal glass, the stem in ruby. Venetian. 16th century. H. $4\frac{1}{4}$ in., diam. $2\frac{1}{4}$ in. (Bernal Collection.) 5*l.* 2*s.* 6*d.*

1873*a.* '55.

LIQUEUR Glass. The bowl and foot in opal glass, the stem in ruby. Venetian. 16th century. H. $3\frac{5}{8}$ in., diam. $1\frac{7}{8}$ in. (Bernal Collection.) 5*l.* 2*s.* 6*d.*

107. '53.

LIQUEUR Glass. Clear glass, with twisted stem and wing mounts. Venetian. 16th or 17th century. H. $6\frac{1}{4}$ in., diam. $3\frac{1}{8}$ in. 12*s.*

79. '53.

LIQUEUR Glass. Opalified glass, twisted stem. Venetian. 17th century. H. $4\frac{5}{8}$ in., diam. $2\frac{7}{8}$ in. 19*s.* 6*d.*

253. '74.

MEDALLION. Glaſs, moulded with a maſk of Meduſa. From a Roman Antique. Diam. $2\frac{3}{8}$ in. (Webb Collection.) 8*l*.

4227. '57.

MEDALLION. In moulded blue glaſs. Circular, with group in relief of a cupid trampling on a ſatyr. Italian. 16th century. Diam. $2\frac{1}{2}$ in. 8*s*.

3988. '56.

MIRROR and Frame. The plate has bevelled edges, the frame bevelled fillet mouldings and cut ornament, the whole of glaſs. Italian (Venetian). 17th century. H. 5 ft. 6 in., W. 3 ft. 6 in. 57*l*.

1896. '55.

MUG or Tankard (with handle). Clear glaſs, ſplaſhed with white, red, and blue. Venetian. 16th or 17th century. H. 6 in., W. $3\frac{3}{4}$ in. (Bernal Collection.) 2*l*. 5*s*.

5869. '59.

PAPER Knife. Clear glaſs, with twiſted handle. Venetian. 17th or 18th century. L. $9\frac{3}{4}$ in. 15*s*.

3648. '56.

PLAQUE. Opaque black glaſs, on which is a ſuperimpoſed layer of white glaſs, enclosing an etching in leaf gold of the Virgin and Child under Gothic canopies, with various Latin

inscriptions (irregular oval shape, much broken). Italian. 15th century. 5 in. by 4 in. 5*l*.

Over the canopy the inscription REGINA CELLI; on the crown of the Virgin SALVE REGINA; on the border of the nimbus in reversed characters AVE MRIN(?), then some indistinct characters, probably GRATIA PLENA) DOMINVS TECVM, and some others undecipherable. On the edges of the robe AVE MARIA, and an inscription which is in part illegible, but the following may be distinguished . . . LILE dARCA . . . F(orE)IV. . .

On the edge of the nimbus round the head of the infant FILIVS MARIA AMEN

1876. '55.

Plate. Deep orange-coloured glass, with fluted border. Venetian. 16th century. H. 1 in., diam. $8\frac{1}{2}$ in. (Bernal Collection). 2*l*. 2*s*.

5500. '59.

Plate. Glass. Gilt and enamelled. Venetian. 16th century. Diam. $11\frac{1}{4}$ in. (Soulages Collection.) 6*l*.

1910a. '55.

Plate or Saucer. Venetian glass. Imitation of the antique; vertical canes of semi-opaque yellow, red, and blue glass inserted into a body of transparent purple glass. Venetian. 16th or 17th century. H. $\frac{7}{8}$ in., diam. $4\frac{1}{2}$ in. (Bernal Collection.) 7*l*.

1867. '55.

Plate. Dark purple glass. The border etched with arabesque ornaments. Venetian(?). 17th century. H. $1\frac{1}{2}$ in., diam. $7\frac{1}{2}$ in. (Bernal Collection.) 3*l*. 3*s*.

2554. '56.

PLATE. Blue glaſs. With ſunk centre, the margin decorated with gilt arabefques. Venetian. 17th century. H. $1\frac{5}{8}$ in., diam. 9 in. 1*l.* 16*s.*

490. '54.

SALVER. Clear glaſs. With waves of white glaſs. Venetian. 16th century. H. $1\frac{3}{8}$ in., diam. $7\frac{3}{8}$ in. 7*s.* 6*d.*

1866. '55.

SALVER. Lace-work glaſs, or “vitro di trina.” Venetian. 16th century (?). H. $1\frac{5}{8}$ in., diam. 16 in. (Bernal Collection.) 11*l.*

A very fine example of the variety of vitro di trina, in which the canes are made to interfect, often called “a reticelli.” This may perhaps be of the manufacture of Briati (Circa 1760–1770). See Introduction, p. xcii.

5490. '59.

SALVER. Glaſs. With gilt and enamelled imbricated pattern; a coat of arms in the centre. Venetian. 16th century. H. $2\frac{1}{8}$ in., diam. $14\frac{1}{2}$ in. (Soulages Collection.) 6*l.*

244. '53.

SALVER or Plateau. Blue glaſs. Venetian. 17th century. H. $1\frac{1}{8}$ in., diam. $20\frac{1}{2}$ in. 3*l.* 3*s.*

915. '55.

SCENT Bottle. Millefiore glaſs. Venetian. 18th century. H. $3\frac{1}{4}$ in., diam. 2 in. 12*s.* 1*d.*

159. '70.

SCENT Bottle. Schmelz glafs. Bought for one penny in the street at Vicenza. Venetian. 1869. H. $2\frac{7}{8}$ in., W. $2\frac{1}{8}$ in. Given by the Rev. Greville J. Chefter.

267. '74.

SEAU or Bucket. Mottled glafs with fwing handle. Venetian. 15th or 16th century. H. 3 in., diam. 3 in. (Webb Collection.) 15/.

1817. '55.

SEAU or Bucket. Glafs. Made up of canes of white, blue, and green, and clear red, white, and green alternating, placed diagonally; gilt metal handle. Venetian. 16th or 17th century. H. 7 in., diam. $6\frac{1}{4}$ in. (Bernal Collection.) 20/.

4360. '57.

SEAU or Cistern. Clear glafs. Circular, with two handles formed of interlaced cords, and studded with masks in relief; the handles and masks gilt. Venetian. First half of 16th century. H. $7\frac{1}{4}$ in., W. 16 in. 10/.

89. '53.

SEAU or Bucket. Clear glafs. With blue margin and twisted handle. Venetian. 17th or 18th century. H. $10\frac{1}{4}$ in., diam. 10 in. by $9\frac{1}{4}$ in. 1/. 14s. 2d.

90. '53.

SEAU or Bucket. Clear glafs. With projecting hoops or bands in blue glafs, and a movable handle in plain

twiſted glaſs. Venetian. 17th or 18th century. H. 7 in., diam. $5\frac{1}{2}$ in. by $4\frac{1}{2}$ in. 1*l.* 14*s.* 2*d.*

91. '53.

SEAU or Bucket. Clear glaſs. With ſcale pattern vertical ribs and twiſted handle. Venetian. 17th or 18th century. H. $6\frac{1}{4}$ in., diam. $5\frac{1}{2}$ in. by $4\frac{3}{8}$ in. 1*l.* 14*s.* 2*d.*

5491. '59.

TAZZA Bowl. Glaſs. Gilt and enamelled. Venetian. Latter part of 15th century. H. $5\frac{3}{4}$ in., diam. $11\frac{1}{4}$ in. (Soulages Collection.) 5*l.* 10*s.*
(*See* Plate XIV.)

537. '64.

TAZZA. Glaſs. The foot and baſe of bowl of Schmelz glaſs, the body and edge decorated with foliage in gold leaf, and ſpots of coloured enamel. In the centre is a ſhield, bearing the arms of Viſconti and Riario of Savona. Venetian. About 1480. H. $2\frac{7}{8}$ in., diam. $9\frac{1}{4}$ in. 70*l.*

269. '74.

TAZZA. Schmelz glaſs, with open ſtem. Venetian. 15th century. H. $3\frac{3}{8}$ in., diam. $3\frac{7}{8}$ in. Bought (Webb Collection). 10*l.*

5504. '59.

TAZZA. Glaſs. Gilt and enamelled; a ſhield of arms in the centre. Venetian. About 1500. H. $2\frac{5}{8}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*



TAZZA BOWL.

From the Dresden Collection.

5498. '59.

TAZZA Bowl. Glafs. On blue ſtem, gilt and enamelled. Venetian. Firſt half of 16th century. H. 6 in., diam. $8\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5499. '59.

TAZZA Bowl. Glafs. Gilt and enamelled. Venetian. Early part of 16th century. H. 2 in., diam. $5\frac{3}{4}$ in. (Soulages Collection.) 5*l.* 10*s.*

5501. '59.

TAZZA Bowl. Glafs. With medallion in the centre containing the figure of a dragon. Venetian. Firſt half of 16th century. H. $3\frac{1}{4}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5503. '59.

TAZZA Bowl. Glafs. Gilt and enamelled, arabefque ornament in the centre. Venetian. 16th century. H. $2\frac{3}{4}$ in., diam. $10\frac{1}{4}$ in. (Soulages Collection.) 5*l.* 10*s.*

5553. '59.

TAZZA. Clear glafs. On twiſted ſtem, ringed with blue round baſe of cup. Venetian. 16th or 17th century. H. $5\frac{3}{8}$ in., diam. $5\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5496. '59.

TAZZA. Glafs. Gilt and enamelled; a medallion in the centre with the figure of Lucretia. Venetian. Latter part of 15th century. H. $1\frac{3}{4}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

1830. '55.

TAZZA. Glaſs. On low ſtem; the bowl ſprinkled with opaque white, yellow, and red glaſs. Venetian. 16th century. H. 3 in., diam. $8\frac{1}{2}$ in. (Bernal Collection.) 3*l.* 5*s.*

1860. '55.

TAZZA. Lace glaſs. "Vitro di trina," on raiſed baluſter ſhaped ſtem. Venetian. 16th century. H. 5 in., diam. $6\frac{3}{8}$ in. (Bernal Collection.) 12*l.* 10*s.*

3656. '55.

TAZZA. Clear glaſs. Diamond moulded, with enamelled imbricated ornaments; in the centre an interlaced fret-work ornament in blue and white enamel, the margin enamelled with blue and white ſpots and partly gilt. Venetian. 16th century. H. $2\frac{1}{4}$ in., diam. $9\frac{1}{2}$ in. 3*l.* 10*s.*

3654. '55.

TAZZA. Glaſs. On baluſter-ſhaped ſtem, the bowl decorated with leaves and flowers in green and yellow enamel, a full-faced maſk in the centre in white enamel. Venetian. 16th century. H. $5\frac{1}{4}$ in., diam. $6\frac{3}{4}$ in. 8*l.*

2585. '56.

TAZZA. Clear glaſs. On fluted baluſter ſtem, the bowl moulded. Venetian. 16th century. H. $5\frac{1}{2}$ in., diam. $6\frac{1}{4}$ in. 2*l.* 8*s.*

5488. '59.

TAZZA Plate. Glaſs. Enamelled and gilt. Venetian. 16th century. H. $1\frac{3}{8}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5489. '59.

TAZZA. Glafs. Enamelled and gilt, and with coat of arms in the centre. Venetian. 16th century. H. $2\frac{1}{4}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5493. '59.

TAZZA Bowl. Glafs. Gilt and enamelled. Venetian. 16th century. H. $6\frac{1}{2}$ in., diam. $9\frac{1}{2}$ in. (Soulages Collection.) 5*l.* 10*s.*

5495. '59.

TAZZA. Glafs. Gilt and enamelled. Venetian. 16th century. H. $2\frac{1}{2}$ in., diam. $9\frac{3}{4}$ in. (Soulages Collection.) 5*l.* 10*s.*

5497. '59.

TAZZA. Glafs. Gilt and enamelled; a shield of arms in the centre. Venetian. 16th century. H. $2\frac{3}{8}$ in., diam. 9 in. (Soulages Collection.) 5*l.* 10*s.*

5565. '59.

TAZZA. Glafs. On bulbed stem. Venetian. 16th century. H. $5\frac{1}{2}$ in., diam. $6\frac{1}{2}$ in. (Soulages Collection.) 1*l.* 5*s.*

5562. '59.

TAZZA. Glafs. With imbricated ring round base of bowl. Venetian. 16th or 17th century. H. 5 in., diam. $4\frac{1}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5567. '59.

TAZZA. Clear glafs with a blackish tinge. On tall, fluted, baluster-shaped stem; the bowl with raised circular

bosses and radiating gadroons. Venetian. 16th century.
H. 6 in., diam. $6\frac{5}{8}$ in. (Soulages Collection.) 5*l*.
(See Plate XVI., fig. 2, p. 80.)

242. '53.

TAZZA, on stem. Clear glaſs, with radiating stripes of laticinio. Venetian. 17th century. H. $4\frac{3}{4}$ in., diam. 6 in. 2*l*. 10*s*.

489. '54.

TAZZA. Clear glaſs. With waved laticinio pattern. Venetian. 17th century. H. $1\frac{5}{8}$ in., diam. $7\frac{1}{8}$ in. 7*s*. 6*d*.

3649. '56.

TAZZA. Clear glaſs. On baluſter ſtem, ornamented with moulded lion's head maſks, garlands of pearls, and gadroons; the bowl diamond-moulded and froſted. Italian (Venetian.) 17th century. H. $5\frac{3}{4}$ in., diam. 6 in. 2*l*. 10*s*.

1623. '55.

TAZZA. Semi-opaque blue glaſs, imitation of lapis lazuli, with patches of gold introduced in imitation of *avan-turine*. Venetian. 18th century. H. $1\frac{1}{2}$ in., diam. $5\frac{1}{2}$ in. 3*l*. 10*s*.

5506. '59.

VASE or Ewer. Clear glaſs of a ſmoky tinge; with handles and cover. Venetian. Probably of the latter part of the 15th century. H. $16\frac{3}{4}$ in., W. 6 in. by $5\frac{3}{4}$ in. (Soulages Collection.) 10*l*.
(See Plate XV.)

487. '53.

VASE or Cup and Cover. Clear glaſs; with raiſed flutings and gadroons, partly gilded. Venetian. 16th century. H. $8\frac{3}{4}$ in., diam. 5 in. 1*l*. 11*s*. 6*d*.



VASE OR EWER.
Venetian, late 15th century.
(5506. '59.)

1

1826. '55.

VASE. Opal glafs; with involuted scroll handles. Venetian. 16th or 17th century. H. $6\frac{3}{8}$ in., W. $5\frac{1}{8}$ in. by $3\frac{1}{8}$ in. (Bernal Collection.) 9*l*.

1862. '55.

VASE or Ewer. Glafs; with vertical columns of opaque pink, white, and blue glafs. Venetian. 16th or 17th century. H. 8 in., diam. $3\frac{5}{8}$ in. (Bernal Collection.) 4*l*. 14*s*.

1874. '55.

VASE. Ruby glafs. Venetian. 16th or 17th century. H. 9 in., diam. $3\frac{1}{2}$ in. (Bernal Collection.) 6*l*. 5*s*.

1902. '55.

VASE. Clear glafs; with two handles; inside, seated on a bulb of blue glafs is a figure of a boy with a wine flask and a glafs, in opaque white glafs. Venetian. 16th or 17th century. H. 9 in., W. $8\frac{3}{4}$ in. by $6\frac{1}{4}$ in. (Bernal Collection.) 20*l*. 5*s*.

4706. '59.

VASE. Blue glafs. Oviform, with bronze gilt mounts. Venetian. 16th or 17th century. H. $5\frac{1}{2}$ in., W. $2\frac{1}{2}$ in. by $2\frac{1}{4}$ in. (From the Museum of the Collegio Romano.)

1543. '56.

VASE. Blue glafs. Sprinkled or powdered with gold. Venetian. 16th century. H. $8\frac{3}{4}$ in., diam. $3\frac{7}{8}$ in. 4*l*.

This is a good example of a process of decoration probably employed as early as the fifteenth century. (See p. lxxxi., of Introduction, note ².)

3001. '56.

VASE. Blue glaſs. Oviform. Mounted with foot and handles in ormoulu. Venetian. 17th century. H. $5\frac{1}{2}$ in., diam. $2\frac{1}{2}$ in. 7*l*.

1911. '55.

WINE Glaſs. On tall involuted cord ſtem, with dark blue wings. Venetian. 15th century. H. 13 in., diam. 4 in. (Bernal Collection.) 16*l*. 10*s*.

80. '53.

WINE Glaſs. Clear glaſs. Bell-shaped, tall ſtem, with blue and white mounts. Venetian. 16th or 17th century. H. $7\frac{1}{4}$ in., diam. $3\frac{1}{2}$ in. 19*s*. 6*d*.

82. '53.

WINE Glaſs. Clear glaſs. The bowl fluted and laterally compreſſed into an oval ſhape, the ſtem enriched with a bead of dark blue glaſs. Venetian. 16th or 17th century. H. $6\frac{3}{4}$ in., W. $3\frac{5}{8}$ in. by $2\frac{3}{4}$ in. 19*s*. 7*d*.

1812. '55.

WINE Glaſs. Clear glaſs of a greeniſh tint, on a tall ſtem, with a knob of open-work. Venetian. 16th or 17th century. H. $11\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 5*l*.

1813. '55.

WINE Glaſs. On a tall involuted cord ſtem, with twiſted fillets in blue and white glaſs, creſted with blue. Venetian. 16th or 17th century. H. 14 in., diam. 5 in. (Bernal Collection.) 17*l*.

1816. '55.

WINE Glafs. Lace glafs or "vitro di trina." Funnel-shaped, on a foot. Venetian. 16th century. H. 12 in., diam. 6 in. (Bernal Collection.) 5*l*.

1841. '55.

WINE Glafs. On a tall involuted cord stem, with twisted fillets in green, blue, and white glafs; the upper part of the stem forming two serpents' heads crested with blue glafs. Venetian. 16th century. H. $14\frac{1}{2}$ in., W. $5\frac{1}{2}$ in. by $4\frac{1}{2}$ in. (Bernal Collection.) 20*l*.

A good example of ornament produced by the use of pincers.

1884. '55.

WINE Glafs. Tazza-shaped, the bowl diamond-moulded, the stem twisted, with two rosettes in opaque white glafs. Venetian. 16th century. H. 5 in., diam. $2\frac{3}{8}$ in. (Bernal Collection.) 3*l*. 10*s*.

2467. '56.

WINE Glafs. Clear glafs; with blue mounts, the lower part of the bowl gadrooned. Venetian. 16th century. H. $6\frac{1}{4}$ in., diam. $3\frac{1}{4}$ in. 3*l*. 15*s*. 3*d*.

5519. '59.

WINE Glafs. Twisted baluster stem, with blue fillet. Venetian. 16th or 17th century. H. $6\frac{1}{8}$ in., diam. $3\frac{3}{4}$ in. (Soulages Collection.) 1*l*. 5*s*.

84. '53.

WINE Glaſs. Clear glaſs. With blue rim, beaded ſtem. The margin of the bowl folded into a quadrangular form. Venetian. 16th or 17th century. H. 8 in., diam. $4\frac{1}{2}$ in. 19s. 7d.

85. '53.

WINE Glaſs. Clear glaſs. With octagonal bowl reſembling the calyx of a flower. Venetian. 16th or 17th century. H. 8 in., diam. $3\frac{7}{8}$ in. 19s. 7d.

92. '53.

WINE Glaſs. Funnel-shaped, formed of vertical columns of laticinio filigree work. Venetian. 16th century. H. $7\frac{3}{4}$ in., diam. $2\frac{5}{8}$ in. 5s.

98. '53.

WINE Glaſs. Clear glaſs. Bell-shaped, with beaded ſtem, partly of blue glaſs, ornamented with ſcroll mountings. Venetian. 16th or 17th century. H. 7 in., diam. $3\frac{7}{8}$ in. 15s.

101. '53.

WINE Glaſs. Clear glaſs. On twiſted baluſter-shaped ſtem. Venetian. 16th or 17th century. H. $11\frac{1}{4}$ in., diam. $3\frac{3}{4}$ in. 15s.

102. '53.

WINE Glaſs. Clear glaſs. With marginal band and ornaments of ſtem in ruby glaſs. Venetian. 16th or 17th century. H. $5\frac{7}{8}$ in., diam. $3\frac{5}{8}$ in. 1l. 10s.

106. '53.

WINE Glafs. Clear glafs. Involute stem and blue wing ornaments. Venetian. 16th or 17th century. H. 10 in., diam. 4 in. 15s.

1810. '55.

WINE Glafs. On a tall involute cord stem, with twisted fillets in green, blue, and white glafs. Venetian. 16th century. H. $12\frac{1}{2}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 7l.

1811. '55.

WINE Glafs. Moulded stem, with lion's head masks, the bowl surrounded with two transverse beaded bands, the margin and stem gilt. Venetian. 16th century. H. $10\frac{3}{4}$ in., diam. $3\frac{3}{8}$ in. (Bernal Collection.) 3l.

5528. '59.

WINE Glafs. Wide bowl. Clear glafs. Ornamented with latticino. Venetian. 16th century. H. $7\frac{1}{2}$ in., diam. $6\frac{1}{4}$ in. (Soulages Collection.) 1l. 10s.

5530. '59.

WINE Glafs. Quatrefoil bowl. Venetian. 16th or 17th century. H. $6\frac{5}{8}$ in., diam. $3\frac{1}{2}$ in. (Soulages Collection.) 1l. 5s.

5531. '59.

WINE Glafs. Baluster-shaped stem. The bowl bulbed, reflexed, and edged with blue. Venetian. 16th or 17th century. H. $7\frac{3}{4}$ in., W. $4\frac{1}{2}$ in. by $3\frac{1}{2}$ in. (Soulages Collection.) 1l. 5s.

5534. '59.

WINE Glaſs. Tall bulbed ſtem. Venetian. 16th or 17th century. H. $7\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 5*s.*

5533. '59.

WINE Glaſs. Ribbed and twiſted ſtem, with ſmall ornaments reſembling handles. Venetian. 16th or 17th century. H. $5\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 5*s.*

(See Plate XVI. fig. 1.)

5538. '59.

WINE Glaſs. Encircled with lines of blue. Venetian. 16th or 17th century. H. $6\frac{1}{4}$ in., diam. $3\frac{3}{4}$ in. (Soulages Collection.) 1*l.* 5*s.*

5539. '59.

WINE Glaſs. Tall narrow bowl and ſmall winged ornaments. Venetian. 16th century. H. $9\frac{1}{4}$ in., diam. $2\frac{1}{2}$ in. (Soulages Collection.) 1*l.* 5*s.*

5541. '59.

WINE Glaſs. Wide ribbed bowl. Venetian. 16th or 17th century. H. 5 in., diam. $4\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 5*s.*

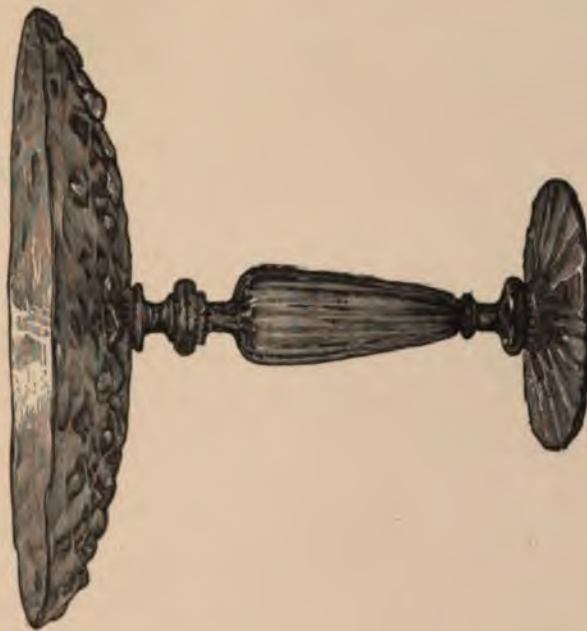
5544. '59.

WINE Glaſs. Twiſted ſtem. Baſe of bowl ringed with blue, the rim with white. Venetian. 16th or 17th century. H. $5\frac{1}{2}$ in., diam. $4\frac{1}{2}$ in. (Soulages Collection.) 1*l.* 10*s.*

PLATE XVI.



WINE GLASS.
Venetian, 16th or 17th century.
(5533. '59.)



TAZZA.
Venetian, 16th century.
(5567. '59.)



CUP.
Venetian, 17th century.
(1888. '55.)

1

12

13

14

5545. '59.

WINE Glafs. Bulbed and twifted ftem. Venetian. 16th or 17th century. H. $8\frac{1}{8}$ in., diam. $4\frac{1}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5546. '59.

WINE Glafs. Undulating ring of blue round the bowl. Venetian. 16th or 17th century. H. $8\frac{1}{4}$ in., diam. 4 in. (Soulages Collection.) 1*l.* 10*s.*

5547. '59.

WINE Glafs. Twifted ftem. Bafe of bowl ringed with blue. Venetian. 16th or 17th century. H. $5\frac{3}{4}$ in., diam. $4\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5548. '59.

WINE Glafs. Waved ring of blue round the bowl. Venetian. 16th or 17th century. H. $6\frac{1}{8}$ in., diam. 4 in. (Soulages Collection.) 1*l.* 10*s.*

5549. '59.

WINE Glafs. Gadrooned ring on bowl, and blue wings. Venetian. 16th or 17th century. H. $10\frac{3}{4}$ in., diam. 3 in. (Soulages Collection.) 1*l.* 10*s.*

5551. '59.

WINE Glafs. Open-work ftem, with winged ornaments. Venetian. 16th or 17th century. H. $6\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5552. '59.

WINE Glaſs. Open-worked corded ſtem, with winged ornaments. Venetian. 16th or 17th century. H. $6\frac{3}{4}$ in., diam. 4 in. (Soulages Collection.) 1*l.* 10*s.*

5554. '59.

WINE Glaſs. The bowl tulip-shaped and ribbed. Venetian. 16th or 17th century. H. $7\frac{1}{4}$ in., diam. $3\frac{1}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5555. '59.

WINE Glaſs. Short ſtem. Venetian. 16th or 17th century. H. $7\frac{3}{4}$ in., diam. $4\frac{1}{8}$ in. (Soulages Collection.) 1*l.* 5*s.*

5557. '59.

WINE Glaſs. Bowl with octagonal lip, and with ſmall wings. Venetian. 16th century. H. $7\frac{1}{8}$ in., diam. $4\frac{1}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5558. '59.

WINE Glaſs. Twiſted open-work ſtem, with winged ornaments. Venetian. 16th or 17th century. H. $7\frac{7}{8}$ in., diam. $3\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5559. '59.

WINE Glaſs. Purple bowl. Stem bulbed and twiſted, with ornaments reſembling wings, partly of blue glaſs. Venetian. 16th or 17th century. H. $5\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5560. '59.

WINE Glafs. Hemispherical bowl. The stem containing an oval disc, with imbricated margin. Venetian. 16th or 17th century. H. $7\frac{3}{8}$ in., diam. $3\frac{3}{4}$ in. (Soulages Collection.) 1*l.* 10*s.*

5561. '59.

WINE Glafs. Twisted stem. Venetian. 16th century. H. $7\frac{5}{8}$ in., diam. $3\frac{7}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5563. '59.

WINE Glafs. Twisted open-work stem with dark blue winged ornaments. Venetian. 16th or 17th century. H. 7 in., diam. $3\frac{3}{8}$ in. (Soulages Collection.) 1*l.* 10*s.*

5573. '59.

WINE Glafs. Twisted baluster stem. Bowl bulbed and winged. Venetian. 16th or 17th century. H. $7\frac{3}{4}$ in., diam. $4\frac{5}{8}$ in. (Soulages Collection.) 1*l.* 13*s.* 4*d.*

1608. '55.

WINE Glafs. On a tall involuted corded stem, with twisted fillets of gold-coloured and clear glafs. Venetian. 17th century. H. $10\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. 8*l.*

2465. '56.

WINE Glafs. Clear glafs. On baluster stem, with handles, and two transverse bands of blue glafs. Italian (Venetian). 17th century. H. 5 in., diam. $3\frac{3}{8}$ in. 2*l.* 3*s.* 3*d.*

2466. '56.

WINE Glaſs. Clear glaſs ; with white handles or mounts.
Italian (Venetian). 17th century. H. 5 in., diam.
 $3\frac{1}{4}$ in. 2*l.* 16*s.*

5529. '59.

WINE Glaſs. Short bulbed ſtem. Venetian. 17th
century. H. $6\frac{1}{2}$ in., diam. 4 in. (Soulages Collec-
tion.) 1*l.* 5*s.*

5536. '59.

WINE Glaſs. Wide bowl on baluſter ſtem. Venetian.
17th century. H. $7\frac{1}{2}$ in., diam. $4\frac{5}{8}$ in. (Soulages
Collection.) 1*l.* 5*s.*

5571. '59.

WINE Glaſs. Bulbed ſtem. Venetian. 17th century.
H. $6\frac{1}{2}$ in., diam. $3\frac{3}{8}$ in. (Soulages Collection.)
1*l.* 13*s.* 4*d.*

5550. '59.

WINE Glaſs. Twiſted ſtem. Venetian. 17th century.
H. $6\frac{1}{4}$ in., diam. $4\frac{1}{8}$ in. (Soulages Collection.)
1*l.* 10*s.*

463. '73.

WINE Glaſs. Plain glaſs, the bowl ſhallow, engraved
and gilt, the ſtem open, widening downwards, and
ending in a circular foot. Venetian. 17th century. H. $3\frac{3}{8}$ in.,
diam. of bowl $2\frac{1}{8}$ in. 15*s.*



SECTION V.—GLASS OF FRANCE.

544 to 544*b*. '68.



OMB, three portions. Glafs, with figures of children at play ; etched on gold leaf. French. Late 17th century. Each $2\frac{1}{4}$ in. by $\frac{3}{8}$ in. Bought, 1*l*. 16*s*.

5569. '59.

DRINKING Glafs. Blue glafs. Engraved with birds, foliage, &c. French (?). 17th century. H. $1\frac{3}{4}$ in., diam. $1\frac{1}{2}$ in. (Soulages Collection.) 1*l*. 13*s*. 4*d*.

2570. '56.

DRINKING Glafs. Clear glafs. Engraved with vases, festoons of flowers, and birds. French. 18th century. H. 7 in., diam. $3\frac{1}{4}$ in. 1*l*. 12*s*.

473. '75.

FLASK or Scent Bottle. Blue glafs, moulded on one side with a crown above three fleurs-de-lys between laurel branches, and, on the other, with three hearts also between branches. The neck is mounted with lead for a screw stopper. French. 17th century. H. $3\frac{3}{8}$ in., W. $1\frac{7}{8}$ in. Given by Rev. Greville J. Chester.

818. '64.

SCENT Bottle. Blue glaſs. Cut and gilt, with ſilver-gilt cap. French (?). 18th century. H. $3\frac{1}{8}$ in. Given by the Rev. R. Brooke.

1853. '55.

WINE Glaſs. Cut and engraved with arabesques, and a motto "Mon fort le ſignera." French or Bohemian. 17th century. H. $6\frac{1}{2}$ in., diam. $3\frac{1}{8}$ in. (Bernal Collection.)
2l. 2s.



SECTION VI.—GLASS OF SPAIN.

395, 395^a. '73.



ALL and Stand. Glas; the inside of the ball splashed with various colours, the stand of a greenish tint. Spanish (Cadalso). 17th century. Diam. of ball, $4\frac{7}{8}$ in.; H. of stand, $5\frac{1}{8}$ in. (Riaño Collection.) 1*l.* 12*s.*

396. '73.

BALL. Glas; the inside splashed with various colours. Spanish (Cadalso). 17th century. Diam. $4\frac{1}{4}$ in. (Riaño Collection.) 17*s.*

397. '73.

BALL. Glas; the inside splashed with various colours. Spanish (Cadalso). 17th century. Diam. $7\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

380. '73.

BARREL. Plain glas, with ferrated hoops, four feet and screw metal bung. Said to be used at the consecration of bishops. Spanish (San Ildefonso). 18th century. H. $4\frac{1}{2}$ in., L. $5\frac{1}{8}$ in. (Riaño Collection.) 17*s.*

213 '73.

BASKET. Green glaſs. Spaniſh (Cadafſo or Maria).
17th century. H. $9\frac{1}{4}$ in., diam. 6 in. (Riaño Collec-
tion.) 2l. 15s.

214. '73.

BASKET. Green and opaque white glaſs. Spaniſh
(Cadafſo or Maria). 17th century. H. 7 in., diam.
 $4\frac{3}{4}$ in. (Riaño Collection.) 2l. 2s.

215. '73.

BASKET. Plain glaſs. Spaniſh (Cadafſo or Maria).
17th century. H. $8\frac{3}{8}$ in., diam. $4\frac{3}{4}$ in. (Riaño Col-
lection.) 2l. 2s.

216. '73.

BASKET. Green glaſs, with applied ornament round the
body, and a tube on the handle. Spaniſh (Cadafſo or
Maria). 17th century. H. $6\frac{5}{8}$ in., diam. $4\frac{1}{2}$ in. (Riaño Col-
lection.) 2l. 2s.

217. '73.

BASKET. Amber-coloured glaſs, with applied ornament
round the body. Spaniſh (Cadafſo or Maria). 17th
century. H. 5 in., diam. $4\frac{3}{4}$ in. (Riaño Collection.) 2l. 2s.

219. '73.

BASKET. Plain glaſs, with ferrated border and ribs.
Spaniſh (Cadafſo). 17th century. H. $3\frac{1}{2}$ in., diam.
 $9\frac{1}{4}$ in. (Riaño Collection.) 2l. 2s.

218. '73.

BASKET. Pink glass with two twisted handles. At the bottom a fleur-de-lys is stamped. Spanish (San Ildefonso?). 18th century. H. $3\frac{3}{4}$ in., diam. $8\frac{3}{4}$ in. (Riaño Collection.) 1*l.* 15*s.*

293 to 293*b.* '73.

BEAKER, with Cover and Plateau. Plain glass, cut and engraved. Spanish (San Ildefonso). 18th century. H. $10\frac{1}{4}$ in., diam. $5\frac{5}{8}$ in., diam. of plateau, $10\frac{1}{8}$ in. (Riaño Collection.) 4*l.*

284. '73.

BEAKER. Plain glass, cut and engraved. Spanish (San Ildefonso). 18th century. H. $7\frac{1}{8}$ in., diam. $5\frac{1}{2}$ in. (Riaño Collection.) 1*l.* 2*s.*

277. '73.

BOTTLE or Decanter. Plain glass, engraved with festoons, stars, etc., gilt, and with handle and stopper. Spanish (San Ildefonso). 18th century. H. 13 in., diam. $6\frac{1}{2}$ in. (Riaño Collection.) 2*l.* 12*s.*

278. '73.

BOTTLE or Decanter. Plain glass, engraved with flowers, gilt, and with handle and stopper. Spanish (San Ildefonso). 18th century. H. 11 in., diam. 6 in. (Riaño Collection.) 2*l.* 7*s.*

279. '73.

BOTTLE or Decanter. Plain glass, engraved with festoons, stars, and flowers, gilt, and with handle and

luña). 18th century. H. $4\frac{3}{8}$ in., W. $2\frac{5}{8}$ in. (Riaño Collection.) 12s.

259. '73.

BOTTLE. Plain glaſs, enamelled with flowers and birds in colours. Spaniſh (Cataluña). 18th century. H. $4\frac{3}{4}$ in., W. $2\frac{7}{8}$ in. (Riaño Collection.) 12s.

260. '73.

BOTTLE. Blue glaſs, enamelled with flowers in colours. Spaniſh (Cataluña). 18th century. H. $5\frac{5}{8}$ in., diam. $2\frac{1}{8}$ in. (Riaño Collection.) 17s.

261. '73.

BOTTLE. Plain glaſs, enamelled with flowers and a rampant animal in colours. Spaniſh (Cataluña). 18th century. H. $4\frac{1}{4}$ in., W. $2\frac{5}{8}$ in. (Riaño Collection.) 12s.

262. '73.

BOTTLE. Plain glaſs, enamelled with flowers and other ornament in colours, with metal ſcrew ſtopper. Spaniſh (Cataluña). 18th century. H. $5\frac{3}{8}$ in., W. $2\frac{3}{4}$ in. (Riaño Collection.) 12s.

263. '73.

BOTTLE. Plain glaſs, octagonal, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonso). 18th century. H. $9\frac{1}{8}$ in., diam. 5 in. (Riaño Collection.) 1l. 13s.

264. '73.

BOTTLE. Plain glaſs, triangular, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonso). 18th century. H. $9\frac{1}{8}$ in., W. $5\frac{5}{8}$ in. (Riaño Collection.) 1l. 8s.

265. '73.

BOTTLE. Plain glaſs, triangular, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. $9\frac{1}{8}$ in., W. $5\frac{5}{8}$ in. (Riaño Collection.) 1*l.* 8*s.*

266. '73.

BOTTLE. Plain glaſs, four-fided, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. $8\frac{3}{4}$ in., W. $3\frac{7}{8}$ in. (Riaño Collection.) 1*l.* 3*s.*

267. '73.

BOTTLE. Plain glaſs, four-fided, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. $8\frac{5}{8}$ in., W. $3\frac{7}{8}$ in. (Riaño Collection.) 1*l.* 3*s.*

268. '73.

BOTTLE. Plain glaſs, hexagonal, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. $9\frac{1}{8}$ in., W. $4\frac{3}{4}$ in. (Riaño Collection.) 1*l.* 8*s.*

269. '73.

BOTTLE. Plain glaſs, four-fided, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. 9 in., W. $2\frac{1}{8}$ in. (Riaño Collection.) 17*s.*

270. '73.

BOTTLE. Plain glaſs, four-fided, engraved. Part of a travelling ſet of eight. Spaniſh (San Ildefonſo). 18th century. H. 9 in., W. $2\frac{1}{8}$ in. (Riaño Collection.) 17*s.*

235. '73.

BOTTLE. Plain glaſs, with flat body and long neck.
 Spaniſh. H. $6\frac{1}{2}$ in., diam. $4\frac{1}{2}$ in. (Riaño Collection.)
 12s.

236. '73.

BOTTLE with Stopper. Plain glaſs, engraved with flowers
 and leaves, gilt. Spaniſh. H. $12\frac{1}{4}$ in., diam. $6\frac{5}{8}$ in.
 (Riaño Collection.) 2l. 13s.

237. '73.

BOTTLE. Plain glaſs, gourd-ſhape, with ferrated bands.
 Spaniſh. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{4}$ in. (Riaño Collection.)
 12s.

238. '73.

BOTTLE with Stopper. Plain glaſs, with bulbous body.
 Spaniſh. H. $10\frac{1}{8}$ in., diam. $5\frac{1}{4}$ in. (Riaño Collection.)
 1l. 13s.

239. '73.

BOTTLE or Vaſe. Plain glaſs, pine-apple pattern. Spa-
 niſh. H. 7 in., diam. $3\frac{5}{8}$ in. (Riaño Collection.) 17s.

240. '73.

BOTTLE. Plain glaſs, hexagonal, with plain and blue
 ferrated ribs. Spaniſh. H. $4\frac{3}{4}$ in., diam. $1\frac{7}{8}$ in. (Riaño
 Collection.) 12s.

1005. '73.

BOTTLE. Green glaſs, externally appearing blue, with
 flattiſh body and ſhort neck. Spaniſh. 17th century.
 H. $5\frac{3}{8}$ in., diam. $6\frac{1}{4}$ in. (Riaño Collection.) 1l.

184. '73.

BOTTLE. Green glafs, in two lobes, with four ferrated handles. Spanifh. 17th century. H. $3\frac{7}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 1*l.* 15*s.*

242. '73.

BOTTLE. Green glafs, gilt, with long neck. Spanifh. H. $5\frac{5}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 17*s.*

243. '73.

BOTTLE. Dark amber glafs, mottled red, with flattened fides. Spanifh. H. $3\frac{3}{4}$ in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 17*s.*

244. '73.

BOTTLE. Pinkifh glafs, with flattened body and long neck. Spanifh. H. $9\frac{3}{8}$ in., diam. $6\frac{3}{8}$ in. (Riaño Collection.) 1*l.* 3*s.*

246. '73.

BOTTLE with Stopper. Plain glafs, engraved with flowers and leaves, gilt. Spanifh (La Granja). H. $4\frac{7}{8}$ in., diam. $3\frac{1}{8}$ in. (Riaño Collection.) 17*s.*

274. '73.

BOTTLE. Plain glafs, with long neck and trefoil mouth, furrounded by laticinio lines, and with long fpout. Ufed for drinking wine. Spanifh. 18th century. H. $9\frac{5}{8}$ in., diam. $4\frac{3}{4}$ in. (Riaño Collection.) 17*s.*

275. '73.

BOTTLE. Plain glaſs, with bulbous body ſpirally ornamented, and ſhort neck. Spaniſh (Cartagena). 18th century. H. 6 in., diam. $6\frac{1}{2}$ in. (Riaño Collection.) 12s.

276. '73.

BOTTLE or Decanter. Plain glaſs, cut and engraved, with handle and ſtopper. Spaniſh (San Ildefonſo). 18th century. H. $12\frac{1}{2}$ in., diam. 6 in. (Riaño Collection.) 2l. 2s.

290. '73.

BOTTLE or Decanter. Opaque white glaſs, engraved with flowers, gilt. Spaniſh (San Ildefonſo). 18th century. H. $8\frac{3}{4}$ in., W. $4\frac{3}{4}$ in. (Riaño Collection.) 1l. 10s.

1002. '73.

BOTTLE. Froſted glaſs, gourd ſhape. Spaniſh. 18th century. H. $3\frac{3}{4}$ in., diam. $2\frac{1}{2}$ in. (Riaño Collection.) 10s.

1003. '73.

BOTTLE for Scent. Dark coloured glaſs, with flattened ſides, ferrated. Spaniſh. 17th century. L. 3 in., W. $2\frac{1}{4}$ in. (Riaño Collection.) 10s.

367. '73.

BOTTLE for Scent. Plain glaſs, with ſpiral ribs and metal ſtopper. Spaniſh. 17th century. H. $3\frac{1}{2}$ in. (Riaño Collection.) 12s.

389. '73.

BOTTLE for Scent. Blue glass, in form of a dove, with screw metal stopper. Spanish (Cadalso). 18th century. H. $4\frac{3}{8}$ in., L. $7\frac{3}{4}$ in. (Riaño Collection.) 1*l*.

390. '73.

BOTTLE for Scent. Opalified glass, in form of a dove, with eyes of red glass, metal mouth. Spanish (Cadalso). 18th century. H. $4\frac{1}{4}$ in., L. $7\frac{1}{2}$ in. (Riaño Collection.) 1*l*.

379. '73.

BOTTLE for Scent. Blue glass, in form of a pistol, with metal stopper. Spanish (Cadalso). 18th century. L. $12\frac{3}{4}$ in. (Riaño Collection.) 17*s*.

199. '73.

BOWL. Green glass, with ferrated handles, and trailed ornament round the lower part of the body. In the centre is a fluted pedestal, upon which is a roughly executed figure of a bird. Spanish (Cadalso or Castril). 17th century. H. $3\frac{5}{8}$ in., diam. $7\frac{1}{2}$ in. (Riaño Collection.) 2*l*. 2*s*.

200. '73.

BOWL. Plain glass, with handles designed to represent chain work. Spanish (Cadalso or Castril). 17th century. H. $4\frac{3}{8}$ in., diam. $6\frac{1}{2}$ in. (Riaño Collection.) 1*l*. 15*s*.

201. '73.

BOWL. Plain glass, gadrooned, with curved handles. In the centre is a blue glass shell, placed on end. Spanish

(Cadalso or Caſtril). 17th century. H. $3\frac{5}{8}$ in., diam. $4\frac{7}{9}$ in.
(Riaño Collection.) 1/. 15s.

385. '73.

CASE for Knitting Needle. Green glaſs, with open applied ornament around the upper part, the lower part ſpirally ribbed. Spaniſh (Maria). 17th century. L. 10 in. (Riaño Collection.) 17s.

386. '73.

CASE for Knitting Needle. Plain glaſs, with an open boſs on the upper part, the lower part ſpirally ribbed. Spaniſh (Maria). 17th century. L. $8\frac{3}{8}$ in. (Riaño Collection.) 12s.

998. '73.

CHANDELIER. Opaque white glaſs. Spaniſh (San Ildefonso.) 18th century. H. 23 in., W. 20 in. (Riaño Collection.) 10/.

366. '73.

CITRON. A model in yellow glaſs, with flower on the ſtem. Spaniſh (Cadalso). 16th century. L. $5\frac{1}{2}$ in. (Riaño Collection.) 1/.

398. '73.

CRUET Stand. For two cruets. Plain glaſs, with three feet and two wide handles. Spaniſh. 18th century. H. $3\frac{3}{8}$ in., W. $6\frac{1}{4}$ in. (Riaño Collection.) 1/.

399. '73.

CRUET, double. For oil and vinegar. Green glaſs, with internal partition; with two necks, two ſpouts, and a

ferrated handle. Spanish. 18th century. H. $6\frac{5}{8}$ in., W. between spouts, $5\frac{3}{4}$ in. (Riaño Collection.) 1/.

273. '73.

C RUET. Double. Two plain glass flasks, on baluster stem, with circular foot. Spanish. 18th century. H. $9\frac{1}{2}$ in., diam. of foot $3\frac{1}{2}$ in. (Riaño Collection.) 17s.

401. '73.

C RUET. Plain glass, with twisted handle and narrow spout. Spanish. 17th century. H. $5\frac{7}{8}$ in., diam. 3 in. (Riaño Collection.) 17s.

362. '73.

C UP. Green glass, with applied ornament and broad circular foot. Spanish (Almeria). 16th century. H. $6\frac{7}{8}$ in., diam. of foot, $5\frac{1}{4}$ in. (Riaño Collection.) 1/.

136. '73.

C UP. Plain glass, the upper part of the bowl expanded and having nine lips, the lower part frosted or crackled; the stem globular and the foot circular. Spanish (Maria). 16th century. H. $7\frac{1}{2}$ in., diam. $8\frac{3}{8}$ in. (Riaño Collection.) 10/ 10s.

349. '73.

C UP. Opalised glass, streaked and mottled with blue. Spanish (Cadalso). 17th century. H. $3\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 12s.

350. '73.

C UP. Blue glass, enamelled with vine leaves, grapes, and flower sprigs, in white and gold. Spanish (Cadalso).

17th century. H. 5 in., diam. $4\frac{1}{8}$ in. (Riaño Collection.) 17s.

351, 351a. '73.

CUP and Saucer. Opalified glaſs, mottled with blue. Spanish (Cadalso). 17th century. H. of cup, $1\frac{3}{4}$ in., diam. $2\frac{3}{4}$ in.; diam. of ſaucer, $4\frac{1}{2}$ in. (Riaño Collection.) 12s.

352. '73.

CUP. Blue glaſs, with wreaths and feſtoons in white and gold. Spanish (Cadalso). 17th century. H. $3\frac{1}{8}$ in., diam. 3 in. (Riaño Collection.) 12s.

343. '73.

CUP. White opaque glaſs, with painted mouldings. Spanish (Cadalso). 17th century. H. 3 in., diam. 3 in. (Riaño Collection.) 12s.

344. '73.

CUP. White opaque glaſs, with pineapple mouldings. Spanish (Cadalso). 17th century. H. $3\frac{1}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 12s.

345. '73.

CUP. White opaque glaſs, with red band round the mouth. Spanish (Cadalso). 17th century. H. $2\frac{3}{4}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 12s.

346. '73.

CUP or Baſin. Opaleſcent glaſs, with ſtreaks of red and blue and ſpiral ribs on the outſide. Spanish (Cadalso). 17th century. H. $3\frac{1}{2}$ in., diam. $4\frac{1}{2}$ in. (Riaño Collection.) 17s.

347. '73.

CUP. White opaque glass, splashed with red, yellow, and blue, with spiral ribs on the outside. Spanish (Cadalso). 17th century. H. $2\frac{5}{8}$ in., diam. $3\frac{3}{4}$ in. (Riaño Collection.) 12s.

348. '73.

CUP. Opalescent glass, splashed with red and blue. Spanish (Cadalso). 17th century. H. $3\frac{1}{8}$ in., diam., $3\frac{1}{4}$ in. (Riaño Collection.) 12s.

996, 996a. '73.

CUP and Stand. Green glass; the cup having two handles, and the stand a waved rim and trailed ornament. Spanish (Cartagena). 17th century. H. of cup, $2\frac{3}{4}$ in., diam. $5\frac{1}{4}$ in.; diam. of stand, $7\frac{1}{8}$ in. (Riaño Collection.) 2l.

997. '73.

CUP. Amber-coloured glass, with two handles, and moulded at the bottom. Spanish (Cartagena). 17th century. H. 4 in., diam. $6\frac{5}{8}$ in. (Riaño Collection.) 1l. 10s.

340. '73.

CUP. Red opaque glass, decorated with gold. Spanish (Cadalso). 17th century. H. $3\frac{1}{8}$ in., diam. $3\frac{5}{8}$ in. (Riaño Collection.) 12s.

341, 341a. '73.

CUP and Saucer. Opaque white glass, the cup with two handles. Spanish (Cadalso). 17th century. H. of cup, $1\frac{1}{8}$ in., diam. $3\frac{1}{4}$ in.; diam. of saucer, $5\frac{1}{4}$ in. (Riaño Collection.) 12s.

342. '73.

CUP. White opaque glaſs, plain. Spaniſh (Cadafſo).
17th century. H. $3\frac{1}{8}$ in., diam. $3\frac{1}{4}$ in. (Riaño Col-
lection.) 12s.

324. '73.

CUP. White opaque glaſs, barrel-ſhape, with red hoops.
Spaniſh (Cadafſo). 17th century. H. $3\frac{5}{8}$ in., diam.
 $2\frac{7}{8}$ in. (Riaño Collection.) 1l.

363. '73.

CUP. Green glaſs, with five lips. Spaniſh (Almeria).
17th century. H. $3\frac{7}{8}$ in., W. $3\frac{1}{8}$ in. (Riaño Collec-
tion.) 17s.

325. '73.

CUP. Blue glaſs, mottled with colours, barrel-ſhape, with
white hoops. Spaniſh (Cadafſo). 17th century. H.
 $2\frac{7}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 1l.

326. '73.

CUP. Blue glaſs, barrel-ſhape, with white hoops. Spaniſh
(Cadafſo). 17th century. H. $2\frac{7}{8}$ in. diam. $2\frac{5}{8}$ in.
(Riaño Collection.) 1l.

327. '73.

CUP. Blue glaſs, barrel-ſhape, with white hoops. Spaniſh
(Cadafſo). 17th century. H. $2\frac{3}{8}$ in., diam. 2 in.
(Riaño Collection.) 1l.

202. '73.

CUP. Greeniſh glaſs, gadrooned in the lower part of the
body, with handles deſigned to repreſent chain work.

Spanish (Cadalso or Castril). 17th century. H. $1\frac{7}{8}$ in., diam. $3\frac{3}{4}$ in. (Riaño Collection.) 1*l.* 5*s.*

203. '73.

CUP. Amber-coloured glass, with pineapple ornament and fluted projections as handles. Spanish (Cadalso or Castril). 17th century. H. $2\frac{1}{8}$ in., diam. $5\frac{3}{8}$ in. (Riaño Collection.) 1*l.* 7*s.*

336. '73.

CUP. Opalified glass, painted with flowers in imitation of Oriental porcelain. Spanish (Cataluña). 18th century. H. $3\frac{1}{8}$ in., diam. $2\frac{7}{8}$ in. (Riaño Collection.) 10*s.*

369. '73.

CUP. Plain glass, lobed, cut, with one handle, engraved with flowers and gilt. Spanish (San Ildefonso). 18th century. H. $1\frac{3}{4}$ in., L. $5\frac{3}{4}$ in. (Riaño Collection.) 7*s.*

1001, 1001*a.* '73.

CUP and Saucer. Opalified glass, painted to imitate Oriental porcelain. Spanish (Cataluña). 18th century. H. of cup, $1\frac{1}{8}$ in., diam. $2\frac{7}{8}$ in.; diam. of saucer, $3\frac{7}{8}$ in. (Riaño Collection.) 15*s.*

355. '73.

CUP. Plain glass, oval bowl with lip, engraved with a château and trees, with winged handle, ending in a shell; baluster stem and circular foot. Spanish (San Ildefonso). 18th century. H. $6\frac{1}{8}$ in., L. of bowl, $5\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

358. '73.

CUP. Blue glaſs, with lobed ſtem and circular foot. Spaniſh. 18th century. H. $4\frac{7}{8}$ in., diam. 3 in. (Riaño Collection.) 13s.

403. '73.

CUP for Sweetmeats. Plain glaſs engraved with wreaths of foliage, gilt, with two handles. Spaniſh (San Ildefonſo). 18th century. H. $1\frac{5}{8}$ in., diam. $2\frac{5}{8}$ in. (Riaño Collection.) 7s.

404. '73.

CUP for Sweetmeats. Opalified glaſs, engraved with flowers, gilt, with two handles. Spaniſh (San Ildefonſo). 18th century. H. 2 in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 12s.

354. '73.

CUP or Chalice. Plain glaſs, cut and engraved. Spaniſh (San Ildefonſo). 18th century. H. $7\frac{3}{4}$ in., diam. of foot, $4\frac{3}{8}$ in. (Riaño Collection.) 2l. 2s.

337. '73.

CUP. Opalified glaſs, painted with flowers in imitation of Oriental porcelain. Spaniſh (Cataluña). 18th century. H. 2 in., diam. $2\frac{5}{8}$ in. (Riaño Collection.) 7s.

338. '73.

CUP. Opalified glaſs, painted with flowers in imitation of Oriental porcelain. Spaniſh (Cataluña). 18th century. H. $1\frac{1}{2}$ in., diam. $2\frac{1}{2}$ in. (Riaño Collection.) 5s.

339. '73.

CUP. Opalised glaſs, painted with flowers in imitation of Oriental porcelain. Spaniſh (Cataluña). 18th century. H. $1\frac{1}{2}$ in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 5s.

394, 394a. '73.

DISH for Sweetmeats. With cover and ſtand. Plain glaſs, with ſpiral ribs. Spaniſh (San Ildefonso). 18th century. H., including cover, $4\frac{3}{4}$ in., diam. 7 in.; diam. of ſtand, $8\frac{3}{8}$ in. (Riaño Collection.) 1l. 17s.

1068. '71.

DRINKING Glaſs. White glaſs, the upper part in form of the Spaniſh veſſel called "bucaro," ribbed, and ſtreaked with colours; the ſtem of Venetian character, pineapple ſhape, with remains of gilding; the foot plain. Spaniſh (Cadafó). 17th century. H. $8\frac{3}{8}$ in., W. of mouth, $3\frac{1}{8}$ in. 12l.

373. '73.

FLASK. Purple glaſs, with curved and ribbed neck, and a waved handle on one ſide. Spaniſh. 18th century. H. $6\frac{1}{2}$ in. (Riaño Collection.) 13s.

135. '73.

GOBLET. The bowl is plain glaſs, enamelled with rows of white, blue, red, and green dots, and with red ſpirals on gold ground, and is ferrated round the bottom; the ſtem and foot are blue glaſs with ſpiral fluting. Spaniſh (Cadafó). 16th century. H. $10\frac{3}{8}$ in., diam. $7\frac{1}{8}$ in. (Riaño Collection.) 10l. 10s.

356. '73.

GOBLET. Blue glaſs, the bowl lobed, engraved and gilt. Spanish. 18th century. H. $6\frac{1}{8}$ in., L. of bowl, $3\frac{7}{8}$ in. (Riaño Collection.) 17s.

375. '73.

HAND Bell. Blue glaſs. Spanish (Cadalso). 18th century. H. $5\frac{1}{8}$ in., diam $2\frac{1}{2}$ in. (Riaño Collection.) 12s.

402. '73.

HOLY-WATER Veſſel. Plain glaſs, the upright back ornamented with trellis pattern and ſpiral twiſts. Spanish (San Ildefonso). 18th century. H. $10\frac{1}{4}$ in., W. $4\frac{3}{8}$ in. (Riaño Collection.) 13s.

370. '73.

INKSTAND with Cover. Green glaſs, with four holders for pens, and applied ferrated ornament. Spanish (Cadalso). 17th century. H. $6\frac{3}{8}$ in., diam. 6 in. (Riaño Collection.) 1l.

376. '73.

JAR with Cover. Blue glaſs. Spanish (Cadalso). 18th century. H. $4\frac{7}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 13s.

377. '73.

JAR with Cover. Sugar-fifter (?) Blue glaſs. Spanish (Cadalso). 18th century. H. $5\frac{1}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 13s.

286. '73.

JAR with Cover. Greenish glafs; cylindrical. Spanish. 17th century. H. $10\frac{5}{8}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 12s.

287. '73.

JAR with Cover. Greenish glafs, cylindrical. Spanish. 17th century. H. $10\frac{5}{8}$ in., diam. $3\frac{3}{8}$ in. (Riaño Collection.) 12s.

179. '73.

JUG. Green glafs, with wide mouth and five lips, ribbed; the foot gadrooned. Spanish (Cartagena or Biar). 16th or 17th century. H. $8\frac{7}{8}$ in., diam. $5\frac{3}{8}$ in. (Riaño Collection.) 3l. 3s.

180. '73.

JUG. Greenish glafs, with interlacing trails on the neck and body; the handle ferrated. Spanish. 16th or 17th century. H. $8\frac{1}{2}$ in., diam. $3\frac{7}{8}$ in. (Riaño Collection.) 3l. 3s.

185. '73.

JUG. Smoke-coloured glafs, with wide mouth and five lips, ribbed. Spanish (Cartagena or Biar). 16th or 17th century. H. $6\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. (Riaño Collection.) 2l. 2s.

186. '73.

JUG. Smoke-coloured glafs, with wide mouth and five lips, the mouth horizontally ribbed, the body spirally. Spanish (Cartagena or Biar). 16th or 17th century. H. 6 in., diam. $4\frac{3}{8}$ in. (Riaño Collection.) 2l. 2s.

285. '73.

JUG with Cover. Plain glaſs, with dotted ornament, the cover furmounted by an expanded flower. Spaniſh (San Ildefonſo). 18th century. H. $11\frac{7}{8}$ in., diam. $6\frac{1}{4}$ in. (Riaño Collection.) 1*l.* 12*s.*

291. '73.

JUG. Opaque white glaſs, painted in imitation of Oriental porcelain, and gilt in parts. Spaniſh (Cataluña). 18th century. H. $9\frac{3}{4}$ in., diam. $5\frac{1}{4}$ in. (Riaño Collection.) 2*l.* 10*s.*

292. '73.

JUG. Plain glaſs, ribbed. Spaniſh (San Ildefonſo). 18th century. H. $8\frac{1}{2}$ in., diam. 5 in. (Riaño Collection.) 17*s.*

371. '73.

LAMP. Green glaſs. Spaniſh (Almeria). 17th century. H. $5\frac{1}{8}$ in. (Riaño Collection.) 13*s.*

372. '73.

LAMP. Pale amber-coloured glaſs. Spaniſh (Almeria). 17th century. H. $3\frac{1}{2}$ in. (Riaño Collection.) 7*s.*

289. '73.

LAMP. Pale amber glaſs, in form of a candleſtick ſupporting a reſervoir with two ſpouts, and ferrated ornament. Spaniſh (Cartagena). 17th century. H. $9\frac{1}{2}$ in., diam. of baſe, $5\frac{1}{8}$ in. (Riaño Collection.) 1*l.* 5*s.*

288. '73.

LAMP. Plain glass, in form of a candlestick with a handle, surmounted by a globe. Spanish (Cartagena). 18th century. H. $10\frac{1}{2}$ in., diam. of base, $4\frac{3}{4}$ in. (Riaño Collection.) 17s.

212 to 212f. '73.

LIQUEUR Stand. With bottle and five cups. White opaque glass, edged with blue. Spanish. 18th century. Diam. of stand, $5\frac{1}{2}$ in.; H. of bottle, $4\frac{5}{8}$ in.; of cups, $1\frac{3}{4}$ in. (Riaño Collection.) 2l. 2s.

357. '73.

LIQUEUR Glass. Plain glass, engraved and gilt. Spanish (San Ildefonso). 18th century. H. $4\frac{1}{4}$ in., diam. $1\frac{7}{8}$ in. (Riaño Collection.) 7s.

392. '73.

MODEL of a Hat. Dark amber-coloured glass. Spanish (Maria). 18th century. H. $3\frac{5}{8}$ in., L. of brim, $6\frac{7}{8}$ in. (Riaño Collection.) 1l.

195. '73.

MUG. Green glass, the body spirally ribbed. Spanish. 16th or 17th century. H. $4\frac{5}{8}$ in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 1l. 15s.

196. '73.

MUG or Vase. Greenish glass, ribbed round the neck. Spanish. 16th or 17th century. H. $4\frac{5}{8}$ in., diam. $1\frac{3}{4}$ in. (Riaño Collection.) 1l. 15s.

197. '73.

MUG. Pale amber glaſs, ſpirally ribbed. Spaniſh. 17th century. H. $2\frac{3}{4}$ in., diam. $1\frac{7}{8}$ in. (Riaño Collection.) 12s.

198. '73.

MUG. Green glaſs; the ſpirals round the neck, the handle, and the outer coat of the body and foot being purple. Spaniſh (Cadalso or Barcelona). 17th century. H. $3\frac{1}{2}$ in., diam. 2 in. (Riaño Collection.) 15s.

188. '73.

MUG. Green glaſs, ribbed on the upper part. Spaniſh. 16th or 17th century. H. $5\frac{5}{8}$ in., diam. 4 in. (Riaño Collection.) 1l. 5s.

193. '73.

MUG. Greeniſh glaſs, ribbed. Spaniſh. 16th or 17th century. H. $4\frac{3}{8}$ in., diam. $2\frac{1}{2}$ in. (Riaño Collection.) 1l. 2s.

189. '73.

MUG. Green glaſs, ſpirally ribbed. Spaniſh. 17th century. H. 5 in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 1l.

192. '73.

MUG. Green glaſs, fluted, and ribbed round the mouth. Spaniſh. 17th century. H. $4\frac{7}{8}$ in., diam. $2\frac{1}{2}$ in. (Riaño Collection.) 1l. 2s.

229. '73.

PILGRIM'S Bottle. Green glass, with two handles. Spanish (Castril or Maria). 17th century. H. 5 in., W. 4 in. (Riaño Collection.) 1*l.* 15*s.*

230. '73.

PILGRIM'S Bottle. Green glass, with two handles and applied ornament of dark colour. Spanish (Castril or Maria). 17th century. H. $4\frac{5}{8}$ in., W. $3\frac{1}{2}$ in. (Riaño Collection.) 1*l.* 15*s.*

231. '73.

PILGRIM'S Bottle or Flask. Green glass, with two handles, and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $4\frac{3}{8}$ in., W. $2\frac{1}{2}$ in. (Riaño Collection.) 1*l.* 10*s.*

232. '73.

PILGRIM'S Bottle or Flask. Green glass, with two handles. Spanish (Castril or Maria). 17th century. H. $3\frac{1}{4}$ in., W. $2\frac{1}{8}$ in. (Riaño Collection.) 1*l.* 3*s.*

233. '73.

PILGRIM'S Bottle or Flask. Green glass, with two handles, and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $3\frac{1}{2}$ in., W. $2\frac{5}{8}$ in. (Riaño Collection.) 1*l.* 3*s.*

234. '73.

PILGRIM'S Bottle. Amber-coloured glass, with two handles, and applied ornament in relief. Spanish (Castril

or Maria). 17th century. H. 6 in., W. $4\frac{1}{4}$ in. (Riaño Collection.) 1*l.* 13*s.*

223. '73.

PILGRIM'S Bottle. Greeniſh glaſs, with two handles, and applied ornament in relief. Spaniſh (Caſtril or Maria). 17th century. H. 5 in., W. $5\frac{1}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

224. '73.

PILGRIM'S Bottle. Green glaſs, with two handles, and applied ornament in relief. Spaniſh (Caſtril or Maria). 17th century. H. $5\frac{1}{8}$ in., W. $5\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

225. '73.

PILGRIM'S Bottle. Green glaſs, with two handles, and applied ornament in relief. Spaniſh (Caſtril or Maria). 17th century. H. $6\frac{1}{8}$ in., W. 5 in. (Riaño Collection.) 2*l.* 2*s.*

226. '73.

PILGRIM'S Bottle. Green glaſs, with two handles, and applied ornament in ſimilar and in darker colour. Spaniſh (Caſtril or Maria). 17th century. H. 6 in., W. $3\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

227. '73.

PILGRIM'S Bottle or Flaſk. Green glaſs, with two handles, and applied ornament in relief. Spaniſh (Caſtril or Maria). 17th century. H. $5\frac{3}{8}$ in., W. $3\frac{1}{4}$ in. (Riaño Collection.) 1*l.* 15*s.*

PLATE XVII.



PILGRIM'S BOTTLE.

Spanish, 17th century.

(222. '73.)



VASE.

Spanish, 17th century.

(333. '73.)

228. '73.

PILGRIM'S Bottle. Greenish glafs, with two handles, and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $4\frac{3}{4}$ in., W. 5 in. (Riaño Collection.) 1*l.* 15*s.*

220. '73.

PILGRIM'S Bottle. Green glafs, with outer coating of claret-colour, with two handles and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $6\frac{1}{2}$ in., W. $6\frac{1}{2}$ in. (Riaño Collection.) 2*l.* 2*s.*

221. '73.

PILGRIM'S Bottle. Green glafs, with two handles, and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $6\frac{3}{4}$ in., W. 5 in. (Riaño Collection.) 2*l.* 2*s.*

222. '73.

PILGRIM'S Bottle. Amber-coloured glafs, with two handles, and applied ornament in relief. Spanish (Castril or Maria). 17th century. H. $5\frac{1}{2}$ in., W. $5\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

(See Plate XVII. fig. 1.)

405. '73.

PLATE. Opaque white glafs. Spanish. 17th century. Diam. $11\frac{1}{4}$ in. (Riaño Collection.) 1*l.*

994. '73.

PLATE. Amber-coloured glafs. Spanish. 17th century. Diam. $8\frac{1}{2}$ in. (Riaño Collection.) 1*l.* 10*s.*

995. '73.

PLATE. Greeniſh glaſs. Spaniſh. 17th century. Diam.
6 $\frac{1}{4}$ in. (Riaño Collection.) 1l.

295. '73.

POCKET Glaſs. Greeniſh glaſs, with flattened ſides,
ribbed, and two plain handles. Spaniſh (Almeria). 17th
century. H. 3 $\frac{1}{2}$ in., W. 2 $\frac{3}{4}$ in. (Riaño Collection.) 10s.

296. '73.

POCKET Glaſs. Green glaſs, with flattened ſides, ribbed
round the upper part and reticulated below. Spaniſh (San
Ildefonſo). 18th century. H. 4 $\frac{1}{2}$ in., W. 2 $\frac{1}{2}$ in. (Riaño
Collection.) 15s.

297. '73.

POCKET Glaſs. Blue glaſs, with flattened ſides. Spaniſh
(San Ildefonſo). 18th century. H. 4 in., W. 3 $\frac{1}{8}$ in.
(Riaño Collection.) 15s.

298. '73.

POCKET Glaſs. Blue glaſs, mottled, with flattened ſides.
Spaniſh (San Ildefonſo). 18th century. H. 4 $\frac{1}{8}$ in., W.
3 $\frac{1}{4}$ in. (Riaño Collection.) 1l.

299. '73.

POCKET Glaſs. Blue glaſs, with imbricated ornament in
white, with flattened ſides. Spaniſh (San Ildefonſo).
18th century. H. 4 $\frac{1}{8}$ in., W. 3 in. (Riaño Collection.) 1l.

300. '73.

POCKET Glafs. Green glafs, splashed with white, with flattened sides. Spanish (San Ildefonso). 18th century. H. $3\frac{7}{8}$ in., W. $2\frac{3}{4}$ in. (Riaño Collection.) 1*l*.

301. '73.

POCKET Glafs. Green glafs, mottled with blue, buff and white, with flattened sides. Spanish (San Ildefonso). 18th century. H. $3\frac{3}{4}$ in., W. $2\frac{1}{2}$ in. (Riaño Collection.) 1*l*.

302. '73.

POCKET Glafs. Plain glafs, with spiral latticinio lines, with flattened sides. Spanish (San Ildefonso). 18th century. H. 3 in., W. $2\frac{1}{8}$ in. (Riaño Collection.) 1*l*.

393. '73.

SALT-CELLAR. Green glafs, with a band of open ribs round the bowl. Spanish (Cartagena). 17th century. H. $4\frac{1}{4}$ in., diam. $4\frac{3}{8}$ in. (Riaño Collection.) 17*s*.

368. '73.

SALT-CELLAR. White opaque glafs, on tripod base. Spanish (Cadalso). 17th century. H. $2\frac{5}{8}$ in., diam. $2\frac{7}{8}$ in. (Riaño Collection.) 7*s*.

283. '73.

SALT-CELLAR. Plain glafs, with four shell-shaped receptacles, baluster stem, and three feet. Spanish (San Ildefonso). 18th century. H. $6\frac{7}{8}$ in., W. $5\frac{3}{8}$ in. (Riaño Collection.) 17*s*.

365. '73.

SHOE. Model in violet-coloured glaſs, with white ſtripes and applied ornament. Spaniſh (Cadafſo). 16th century. L. $6\frac{1}{2}$ in. (Riaño Collection.) 12s.

387. '73.

SMOOTHING Implement. Amber-coloured glaſs, in form of a diſc with ribbed handle. Spaniſh (Maria). 17th century. H. $4\frac{7}{8}$ in., diam. $4\frac{3}{8}$ in. (Riaño Collection.) 12s.

353. '73.

STANDING Glaſs, with Cover. Plain glaſs, richly cut. Spaniſh (San Ildefonſo). 18th century. H. $18\frac{1}{2}$ in., diam. of mouth, 5 in. (Riaño Collection.) 5l.

1082. '71.

TAZZA Bowl. Plain glaſs, the lower part of the body ſpirally waved, and decorated with ſcale pattern in gold and coloured dots, the foot fluted. Spaniſh (Cadafſo). 16th century. H. $5\frac{3}{4}$ in., diam. 11 in. 10l.

204. '73.

TAZZA. Of vitro di trina; in the central part of the bowl the lines interſect, and a ſmall bubble is in each ſpace between them, as in many Venetian examples. Spaniſh (Cadafſo?). 16th century. H. $3\frac{7}{8}$ in., diam. $14\frac{3}{4}$ in. (Riaño Collection.) 6l. 6s.

This is the only example in the collection of glaſs from Spain in which this principle of ornamentation is fully carried out, and doubts may perhaps ariſe whether it is not really of Venetian origin.

1000. '73.

TAZZA. Pale green glafs, with trailed ornament on the under furface. Spanifh (Cartagena). 17th century. H. $3\frac{5}{8}$ in., diam. 10 in. (Riaño Collection.) 1*l.* 10*s.*

211. '73.

TAZZA. Greenifh glafs, with trailed ornament under the plateau. Spanifh. 17th century. H. 3 in., diam. 11 in. (Riaño Collection.) 2*l.* 15*s.*

205. '73.

TAZZA. Plain glafs, with blue rim, the foot of amber glafs with pine-apple ornament. Spanifh. 17th century. H. 3 in., diam. 11 in. (Riaño Collection.) 4*l.* 4*s.*

206. '73.

TAZZA. Plain glafs, gadrooned, with moulding round the rim. Spanifh. 17th century. H. $2\frac{3}{4}$ in., diam. $9\frac{3}{8}$ in. (Riaño Collection.) 2*l.* 15*s.*

207. '73.

TAZZA. Plain glafs, with blue rims and reticulated ornament. Spanifh. 17th century. H. $2\frac{3}{8}$ in., diam. $10\frac{3}{8}$ in. (Riaño Collection.) 2*l.* 15*s.*

208. '73.

TAZZA. Plain glafs, the under part of the plateau engraved with flowers, gilt, the foot alfo engraved with a garland of leaves, gilt. Spanifh (San Ildefonso). 18th

century. H. $4\frac{1}{4}$ in., diam. $10\frac{1}{4}$ in. (Riaño Collection.)
3*l.* 3*s.*

209. '73.

TAZZA. Plain glaſs, the under part of the plateau froſted. Spaniſh. 17th century. H. $3\frac{1}{2}$ in., diam. $10\frac{1}{2}$ in. (Riaño Collection.) 2*l.* 15*s.*

210. '73.

TAZZA. Cream-coloured glaſs. Spaniſh. 17th century. H. 3 in., diam. $9\frac{3}{4}$ in. (Riaño Collection.) 2*l.*

374. '73.

TAZZA. Blue glaſs. Spaniſh (Cadalso). 18th century. H. $2\frac{1}{2}$ in., diam. $8\frac{7}{8}$ in. (Riaño Collection.) 1*l.* 12*s.*

381. '73.

TOY. Amber-toned glaſs, with applied ornament, intended to repreſent an ox. Spaniſh (Cadalso or Caſtril). 17th century. H. $4\frac{1}{2}$ in., L. $7\frac{1}{2}$ in. (Riaño Collection.) 17*s.*

382. '73.

TOY. Green glaſs, with applied ornament, intended to repreſent a ſtag. Spaniſh (Cadalso or Caſtril). 17th century. H. $5\frac{1}{2}$ in., L. $5\frac{3}{4}$ in. (Riaño Collection.) 17*s.*

383. '73.

TOY. Purpliſh and greeniſh glaſs; intended to repreſent a dog. Spaniſh (Cadalso or Caſtril). 17th century. H. $2\frac{1}{2}$ in., L. 4 in. (Riaño Collection.) 12*s.*

391. '73.

TOY, or Ornament for Suspension. White opaque glass, in form of a dove flying. Spanish (Cadalso). 17th century. L. $6\frac{1}{4}$ in. (Riaño Collection.) 17.

384. '73.

TOY. Plain glass; intended to represent a mouse. Spanish (Cadalso or Castril). 17th century. H. $1\frac{5}{8}$ in., L. $2\frac{3}{4}$ in. (Riaño Collection.) 55.

307. '73.

TUMBLER. Greenish glass, with irregular flutings. Spanish (Cartagena). 17th century. H. $4\frac{1}{4}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 125.

308. '73.

TUMBLER. Amber-coloured glass, with curved flutings. Spanish (Cartagena). 17th century. H. $4\frac{7}{8}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 125.

999. '73.

TUMBLER. Green glass, with raised diamond pattern on the outside. Spanish (Cartagena). 17th century. H. $3\frac{3}{8}$ in., diam. $3\frac{5}{8}$ in. (Riaño Collection.) 105.

329. '73.

TUMBLER. Plain glass, with white lines round the mouth. Spanish (Cataluña). 17th century. H. $4\frac{1}{8}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 155.

328. '73.

TUMBLER. Violet coloured glass, with white lines round the mouth. Spanish (Cataluña). 17th century. H. $3\frac{5}{8}$ in., diam. $3\frac{3}{8}$ in. (Riaño Collection.) 1l.

306. '73.

TUMBLER. Greenish glass, with moulded zigzag and diamond patterns in relief. Spanish (Cartagena). 17th or 18th century. H. $4\frac{3}{8}$ in., diam. $3\frac{7}{8}$ in. (Riaño Collection.) 12s.

319. '73.

TUMBLER. Plain glass, bell-shaped, engraved with flowers, gilt. Spanish. 18th century. H. $3\frac{1}{2}$ in., diam. $3\frac{1}{8}$ in. (Riaño Collection.) 12s.

313. '73.

TUMBLER. Plain glass, ribbed, enamelled in colours with birds and flowers. Spanish (Cataluña). 18th century. H. $3\frac{3}{4}$ in., diam. 3 in. (Riaño Collection.) 12s.

314. '73.

TUMBLER. Plain glass, enamelled in colours with the arms of Spain, and the inscription, "Viva el Rey de España." Spanish (Cataluña). 18th century. H. $3\frac{1}{8}$ in., diam. $2\frac{1}{2}$ in. (Riaño Collection.) 12s.

315. '73.

TUMBLER. Plain glass, engraved with a coronet and a shield of arms with keys as supporters. Spanish. 18th century. H. $4\frac{1}{4}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 1l.

316. '73.

TUMBLER. Plain glass, engraved with trees, an acute pyramid, and birds with garlands. Spanish. 18th century. H. $3\frac{7}{8}$ in., diam. $2\frac{7}{8}$ in. (Riaño Collection.) 1*l*.

317. '73.

TUMBLER. Plain glass, bell-shaped, engraved with garlands, gilt. Spanish. 18th century. H. $5\frac{1}{8}$ in., diam. 4 in. (Riaño Collection.) 15*s*.

318. '73.

TUMBLER. Plain glass, bell-shaped, engraved with flowers, gilt. Spanish. 18th century. H. $4\frac{1}{2}$ in., diam. $3\frac{5}{8}$ in. (Riaño Collection.) 12*s*.

303. '73.

TUMBLER. Opalised glass, enamelled in colours with flowers, the arms of Spain, and the inscription "Viva el Rey de España." Spanish (Cataluña). 18th century. H. $5\frac{1}{2}$ in., diam. $4\frac{5}{8}$ in. (Riaño Collection.) 1*l*.

323. '73.

TUMBLER. White opaque glass, enamelled with blue flowers. Spanish. 18th century. H. $3\frac{1}{4}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 15*s*.

304. '73.

TUMBLER. Opaque white glass, enamelled in colours with flowers, the arms of Spain, and the inscription, "Vivat el Rey de España." Spanish (Cataluña). 18th century. H. $5\frac{3}{8}$ in., diam $4\frac{1}{8}$ in. (Riaño Collection.) 1*l*.

322. '73.

TUMBLER. Opalified glaſs, bell-shaped, engraved and gilt. Spaniſh. 18th century. H. $4\frac{1}{2}$ in., diam. $3\frac{3}{8}$ in. (Riaño Collection.) 15s.

305. '73.

TUMBLER. Opalified glaſs, enamelled in colours with flowers, the arms of Spain, and the inſcription, "Vivat el Rey de Eſpanna." Spaniſh (Cataluña). 18th century. H. 4 in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 15s.

309. '73.

TUMBLER. Plain glaſs, fluted and engraved. Spaniſh (Cartagena). 18th century. H. $4\frac{1}{4}$ in., diam. $3\frac{5}{8}$ in. (Riaño Collection.) 12s.

310. '73.

TUMBLER. Plain glaſs, fluted and cut. Spaniſh (Cartagena). 18th century. H. $3\frac{1}{8}$ in., diam. $3\frac{3}{4}$ in. (Riaño Collection.) 12s.

311. '73.

TUMBLER. Plain glaſs, with remains of painted flowers. Spaniſh (Cartagena). 17th century. H. $4\frac{3}{8}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 10s.

312. '73.

TUMBLER. Plain glaſs, enamelled with flowers in colours. Spaniſh (Cataluña). 18th century. H. $5\frac{1}{4}$ in., diam. $4\frac{1}{8}$ in. (Riaño Collection.) 15s.

137. '73.

VASE. Plain glass ribbed, with four large and four smaller handles, covered with green glass and ferrated. Spanish (Maria). 16th century. H. $5\frac{3}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 6*l.* 6*s.*

138. '73.

VASE. Green glass, with bands of applied threads and four large and four smaller handles, ferrated. Spanish (Maria). 16th century. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{2}$ in. (Riaño Collection.) 4*l.* 4*s.*

139. '73.

VASE. Green glass, ribbed, with four ferrated handles. Spanish (Maria or Castril). 16th or 17th century. H. $6\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 3*l.* 3*s.*

159. '73.

VASE. Pale green glass, the neck ribbed, with ribbed handles. Spanish. 16th or 17th century. H. $6\frac{7}{8}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 2*l.* 2*s.*

160. '73.

VASE. Green glass, with wide ribbed mouth and four lips, and two ferrated handles. Spanish. 16th or 17th century. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{8}$ in. (Riaño Collection.) 3*l.* 3*s.*

161. '73.

VASE. Very pale yellowish glass, with wide ribbed neck, gadrooned foot, and two ferrated handles. Spanish. 16th or 17th century. H. $6\frac{7}{8}$ in., diam. $2\frac{7}{8}$ in. (Riaño Collection.) 2*l.* 15*s.*

142. '73.

VASE. Green glaſs, with ribs and trails of applied glaſs, and four ferrated handles. Spaniſh (Maria or Caſtril). 16th or 17th century. H. $5\frac{7}{8}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 3*l.* 3*s.*

143. '73.

VASE. Amber glaſs with ribs and trails of applied glaſs, and four ferrated handles. Spaniſh (Maria or Caſtril). 16th or 17th century. H. $6\frac{1}{2}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 3*l.* 3*s.*

144. '73.

VASE. Green glaſs, with ribs and trails of applied glaſs, and four ferrated handles. Spaniſh (Maria or Caſtril). 16th or 17th century. H. $6\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 3*l.* 3*s.*

151. '73.

VASE. Green glaſs, ribbed, with eight ferrated handles. Spaniſh (Maria). 16th century. H. $7\frac{3}{4}$ in., diam. 3 in. (Riaño Collection.) 6*l.* 6*s.*
(See Plate XVIII., fig. 1.)

152. '73.

VASE. Green glaſs, with wide ribbed mouth, and four lips, ferrated band and applied ornaments on body, and two plain handles. Spaniſh. 16th or 17th century. H. $8\frac{3}{8}$ in., diam. $5\frac{1}{4}$ in. (Riaño Collection.) 3*l.* 3*s.*

153. '73.

VASE. Pale amber glaſs, fluted and ribbed, with two ſcroll handles. Spaniſh. 16th or 17th century. H. 8 in., diam. $4\frac{1}{4}$ in. (Riaño Collection.) 3*l.* 3*s.*



VASE.
Spanish, 16th century.
(151. '73.)



VASE.
Spanish, 17th century.
(162. '73.)

1. The first part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

2. The second part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

3. The third part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

4. The fourth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

5. The fifth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

6. The sixth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

7. The seventh part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

8. The eighth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

9. The ninth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

10. The tenth part of the document is a list of the names of the persons who have been appointed to the various offices of the city of New York.

154. '73.

VASE. Green glafs, with applied ornaments on the plain body, and two ferrated handles. Spanish. 16th or 17th century. H. $8\frac{3}{8}$ in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 3*l.* 3*s.*

155. '73.

VASE. Plain glafs, with wide ribbed mouth and four lips, applied ornaments on the plain body, and two ferrated handles. Spanish. 16th or 17th century. H. $7\frac{1}{4}$ in., diam. $4\frac{5}{8}$ in. (Riaño Collection.) 3*l.* 3*s.*

156. '73.

VASE. Plain glafs, with wide ribbed mouth and five lips, leaf pattern on foot, and two winged handles. Spanish. 16th or 17th century. H. 7 in., diam. $4\frac{3}{4}$ in. (Riaño Collection.) 3*l.* 3*s.*

168. '73.

VASE. Smoked glafs, with gadroons on the body and foot, and two green handles. Spanish. 16th or 17th century. H. $5\frac{1}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 2*l.* 2*s.*

175. '73.

VASE. Plain amber glafs, with two handles. Spanish. 16th or 17th century. H. $4\frac{1}{8}$ in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 1*l.* 5*s.*

157. '73.

VASE. Plain glafs, the mouth ribbed, the upper part of the body and the feet gadrooned, and with two winged handles. Spanish. 16th or 17th century. H. 7 in., diam. $3\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 15*s.*

176. '73.

VASE. Pale amber glaſs, gadrooned on the body and foot, with two handles. Spaniſh. 16th or 17th century. H. $3\frac{1}{4}$ in., diam. $1\frac{7}{8}$ in. (Riaño Collection.) 15s.

294. '73.

VASE. Green glaſs, with blue lines round the neck, and blue ferrations on the remaining handle. Spaniſh (Cartagena). 17th century. H. $5\frac{5}{8}$ in., diam. 3 in. (Riaño Collection.) 17s.

364. '73.

VASE. Plain glaſs, with red and white bands and ribs. Spaniſh (Cadalso). 17th century. H. $4\frac{5}{8}$ in., diam. of mouth, $2\frac{3}{4}$ in. (Riaño Collection.) 17s.

335. '73.

VASE. Blue glaſs, ſpirally fluted, with two handles. Spaniſh (Cadalso). 17th century. H. $2\frac{1}{4}$ in., diam. $2\frac{1}{8}$ in. (Riaño Collection.) 10s.

331. '73.

VASE. Gros-blue glaſs, with white handles and white foot with blue rim. Spaniſh (Cadalso). 17th century. H. $8\frac{1}{8}$ in., W. at handles, 7 in. (Riaño Collection.) 2l. 10s.

332. '73.

VASE. Blue and white mottled glaſs, without handles. Spaniſh (Cadalso). 17th century. H. $7\frac{1}{2}$ in., diam. of foot, $3\frac{3}{4}$ in. (Riaño Collection.) 2l. 5s.

333. '73.

VASE. Blue and white mottled glass, with two handles. Spanish (Cadalso). 17th century. H. $6\frac{1}{4}$ in., W. at handles, $5\frac{3}{4}$ in. (Riaño Collection.) 2*l.* 5*s.*

(See Plate XVII., fig. 2, p. 115.)

170. '73.

VASE. Plain glass, with ribbed neck and two handles. Spanish. 17th century. H. $4\frac{3}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 1*l.* 12*s.*

171. '73.

VASE. Pale amber glass, gadrooned on the body and foot, with two handles. Spanish. 17th century. H. $4\frac{1}{4}$ in., diam. $2\frac{1}{8}$ in. (Riaño Collection.) 1*l.* 12*s.*

172. '73.

VASE. Pale amber glass, gadrooned on the body and foot, with two green handles. Spanish. 17th century. H. $4\frac{3}{8}$ in., diam. $2\frac{1}{8}$ in. (Riaño Collection.) 1*l.* 12*s.*

173. '73.

VASE. Pale amber glass, gadrooned on the body and foot, with remains of enamel painting, and two handles. Spanish. 17th century. H. $4\frac{1}{4}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 1*l.* 12*s.*

174. '73.

VASE. Greenish glass, with ribbed neck, gadrooned foot, and two ferrated handles. Spanish. 16th or 17th century. H. $3\frac{7}{8}$ in., diam. 2 in. (Riaño Collection.) 1*l.* 12*s.*

330. '73.

VASE. Bleu-du-roi glaſs, with white handles and white foot with blue rim. Spaniſh (Cadalso). 17th century. H. $8\frac{1}{4}$ in., W. at handles, $7\frac{1}{4}$ in. (Riaño Collection.) 2*l.* 10*s.*

177. '73.

VASE. Green glaſs, with applied ornament on the body, and two handles, from one of which a looſe ring depends. Spaniſh. 17th century. H. $3\frac{1}{8}$ in., diam. $1\frac{1}{2}$ in. (Riaño Collection.) 15*s.*

178. '73.

VASE. Green glaſs, ribbed, with two handles. Spaniſh. 17th century. H. $2\frac{1}{2}$ in., diam. $1\frac{3}{4}$ in. (Riaño Collection.) 12*s.*

158. '73.

VASE. Green glaſs, with two plain handles. Spaniſh. 17th century. H. 7 in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 2*l.* 2*s.*

388. '73.

VASE. Plain glaſs, with central mouth and four others tapering upwards, and ornament of wings and loops on the body. Spaniſh (Barcelona). 17th century. H. $8\frac{3}{4}$ in., diam. $4\frac{1}{2}$ in. (Riaño Collection.) 1*l.*

145. '73.

VASE. Green glaſs, with ribs, trails, and ſhells of applied glaſs, and four ferrated handles. Spaniſh (Maria or Caſtril). 17th century. H. $5\frac{1}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 2*l.* 15*s.*

162. '73.

VASE. Green glass, with black handles, the ribs on the neck and the outer coat of the foot also black. Spanish. 17th century. H. $5\frac{5}{8}$ in., diam. $3\frac{1}{8}$ in. (Riaño Collection.) 2l. 2s.
(See Plate XVIII., fig. 2, p. 128.)

166. '73.

VASE. Green glass, with ribbed neck and two handles. Spanish. 17th century. H. $6\frac{1}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 2l. 2s.

167. '73.

VASE. Green glass, with ribbed neck, a ferrated band round the body, and two handles. Spanish. 17th century. H. $5\frac{7}{8}$ in., diam. $2\frac{3}{4}$ in. (Riaño Collection.) 2l. 2s.

378. '73.

VASE. Blue glass. Spanish (Cadalso). 18th century. H. $4\frac{7}{8}$ in., diam. of foot, $2\frac{3}{8}$ in. (Riaño Collection.) 12s.

280. '73.

VASE with Cover. Plain glass, with two handles, engraved with flowers. Spanish (San Ildefonso). 18th century. H. 15 in., diam. $5\frac{1}{2}$ in. (Riaño Collection.) 3l. 3s.

281. '73.

VASE with Cover. Plain glass, with two handles, engraved with flowers, gilt. Spanish (San Ildefonso). 18th century. H. $12\frac{3}{4}$ in., diam. $4\frac{1}{8}$ in. (Riaño Collection.) 2l. 12s.

282. '73.

VASE with Cover. Plain glaſs, with two handles, engraved with flowers, gilt. Spaniſh (San Ildefonso). 18th century. H. 8 in., diam. $3\frac{1}{2}$ in. (Riaño Collection.) 1*l.* 12*s.*

320. '73.

VASE. Greeniſh glaſs, plain, without handles. Spaniſh. 18th century. H. $6\frac{1}{8}$ in., diam. $3\frac{1}{4}$ in. (Riaño Collection.) 12*s.*

321. '73.

VASE. Greeniſh glaſs, with ſmall mouth, without handles. Spaniſh. 18th century. H. $4\frac{7}{8}$ in., diam. $2\frac{3}{8}$ in. (Riaño Collection.) 12*s.*

245. '73.

VASE or Bottle. Opaque white glaſs, ſtreaked with red and blue, with curved and ferrated handles (imperfect). Spaniſh. H. $5\frac{1}{4}$ in., W. $4\frac{5}{8}$ in. (Riaño Collection.) 17*s.*

241. '73.

VASE or Bottle. Amber-coloured glaſs, facettèd. Spaniſh. H. $4\frac{3}{4}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 12*s.*

361. '73.

WINE Glaſs. Green glaſs, the ſtem frilled and the foot gadrooned. Spaniſh (Caſtril). 17th century. H. $4\frac{3}{8}$ in., diam. $2\frac{1}{4}$ in. (Riaño Collection.) 13*s.*

359. '73.

WINE Glafs. Plain glafs, with lobed bowl, gilt with flowers and a band round the mouth. Spanish. 18th century. H. $3\frac{1}{2}$ in., L. of bowl, $3\frac{3}{4}$ in. (Riaño Collection.) 12s.

360. '73.

WINE Glafs. Plain amber-coloured glafs. Spanish (Almeria). 17th century. H. $4\frac{5}{8}$ in., diam. $3\frac{1}{8}$ in. (Riaño Collection.) 17s.



*SECTION VII.—GLASS OF GERMANY, HOLLAND,
AND THE LOW COUNTRIES.*

1877. '55.



BEAKER. Clear glass. Enamelled with an elaborate coat of arms and the inscription, "Hof Kellerei (Court Cellarage) Dresden." German. Dated 1687. H. $4\frac{1}{2}$ in., diam. $2\frac{3}{8}$ in. (Bernal Collection.) 9/.

The glass of which this is made is remarkably clear, and the whole has a very fresh and modern look.

1878. '55.

BEAKER and Cover. Clear glass. On ball feet, with birds and flowers in gold and white enamel. German. 17th century. H. 5 in., diam. $2\frac{3}{4}$ in. (Bernal Collection.) 5/ 10s.

1904. '55.

BEAKER, with Cover. Glass. Ornamented with emblems in medallions, and with flowers and scroll-work, enamelled in brown and white. German. 17th century. H. $6\frac{1}{4}$ in., diam. $3\frac{5}{8}$ in. (Bernal Collection.) 1/.

1906. '55.

BEAKER. Glass. With rude vertical columns of latticino, and enamelled with two German shields of arms, one of

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which is the escutcheon of Saxony, and German inscriptions. German (Dresden). Dated 1623. H. $6\frac{1}{2}$ in., diam. 3 in. (Bernal Collection.) 12*l*.

1907. '55.

BEAKER. Glas. Enamelled. A woman embracing a boy who stands upon a ladder; with inscriptions. German. 17th century. H. $5\frac{1}{4}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 1*l*. 8*s*.

4293. '57.

BEAKER. Cut glas. With hunting scenes in gold etched work, the glas surmounted with silver-gilt rim, handles, &c. German. About 1690. H. $3\frac{1}{4}$ in., W. $4\frac{1}{4}$ in. by $2\frac{3}{4}$ in. 7*l*.

1846. '55.

BEAKER. Blue glas. Enamelled with an interlaced cypher in white. German. Dated 1678. H. $5\frac{3}{4}$ in., diam. $4\frac{1}{4}$ in. (Bernal Collection.) 2*l*.

1852. '55.

BEAKER. Clear glas. With cover surmounted by a double eagle. The vessel and cover diamond moulded. German. 17th century. H. $21\frac{3}{8}$ in., diam. 6 in. (Bernal Collection.) 36*l*.

1849. '55.

BEAKER or Tumbler. Engraved glas. With red and green circular facet cut pastes inserted, and masks of lions' heads, gilt; a band of gilding round the lip. Bohemian. 17th century. H. $4\frac{3}{4}$ in., diam. $3\frac{7}{8}$ in. (Bernal Collection.) 4*l*.

1855. '55.

BEAKER. Glaſs. Oviform. Engraved with landſcapes, hunting ſubjects, &c. French or Bohemian. 17th century. H. $4\frac{3}{4}$ in., W. $3\frac{1}{4}$ in. by $2\frac{3}{4}$ in. (Bernal Collection.) 7*l.* 10*s.*

1517. '55.

BEAKER or "Wiederkom." Glaſs. Enamelled with the Imperial eagle, bearing on his wings the arms of the Electors, free cities, and other conſtituents of the German empire, and the date 1594. German. H. 17 in., diam. $5\frac{1}{2}$ in. 10*l.*

1848. '55.

BEAKER or Tumbler. Cut glaſs. With an etching of a landſcape and chamois hunt on gold leaf, enſclosed between the two layers of the glaſs. German. 18th century. H. $3\frac{1}{8}$ in., diam. $2\frac{3}{4}$ in. (Bernal Collection.) 1*l.* 1*s.*

9011. '63.

BELL. Dark blue glaſs. With mounting of chaſed ſilver, and three external clappers. German. 16th or 17th century. H. $6\frac{1}{2}$ in., diam. 3 in. 2*l.* 10*s.* 3*d.*

9012. '63.

BELL. Moulded clear glaſs. Mounted with an enamelled female figure and gilt clapper. German. 17th century. H. $4\frac{3}{4}$ in., diam. $2\frac{3}{4}$ in. 1*l.* 7*s.* 9*d.*

69. '52.

BOTTLE. Semi-opaque white glaſs. Enamelled in red, blue, and yellow, with ſcroll work. In front a woman

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carrying pails. Dutch (?). 17th or 18th century. H. $5\frac{1}{4}$ in., W. $2\frac{1}{8}$ in. 10s.

67. '53.

BOTTLE. Blue glass. Enamelled with flowers and birds, mounted in pewter. Dutch (?). 17th century. H. $6\frac{1}{4}$ in., W. $3\frac{3}{8}$ in. by $2\frac{1}{4}$ in. 3s.

572. '53.

BOTTLE with Handle. Purple glass. With embossed ribs. Dutch (?). 17th century. H. 8 in., diam. $5\frac{1}{4}$ in. Given by Mr. Farrer.

1850a. '55.

BOTTLE or Carafe. Clear glass. Oval, engraved with arabesques, and with medallion containing a Chinese landscape subject; underneath the foot is inscribed the artist's name, "Maverl." Bohemian. Dated 1719. H. 10 in., W. $5\frac{3}{8}$ in. by $3\frac{1}{4}$ in. (Bernal Collection.) 8l. 10s.

467. '73.

BOTTLE. Glass, hexagonal, enamelled with flowers, the Imperial Eagle, and a double row of dots; it has a pewter screw cap. German. Early 18th century. H. 6 in., diam. $3\frac{5}{8}$ in. 15s.

1836. '55.

CUP with Cover. Dark green glass, cylindrical. With etched arabesque ornaments. German. 16th century. H. 9 in., diam. $3\frac{3}{8}$ in. (Bernal Collection.) 3l.

1837. '55.

CUP. Brown glaſs. Elliptic, the margin folded over, with German inſcriptions in white enamel. German. 17th century. H. 5 in., W. $3\frac{1}{4}$ in. (Bernal Collection.) 4*l*.

471. '73.

CUP. Plain glaſs, with broad foot and ſhort ſtem, ſpirally gadrooned; on the body are two handles, and eight ſtapes ſupporting looſe rings. German. 16th or 17th century. H. $3\frac{3}{8}$ in., diam. $3\frac{1}{2}$ in. Bought, 1*l*. 10*s*.

77. '72.

CUP. Green glaſs, with wide mouth and cylindrical ſtem, the body with wreaths and arms; the arms of the ſeven United Provinces, apparently drawn with a diamond point and gilt, the ſtem irregularly thickened in parts, the foot mounted in gilt metal. Dutch or Flemiſh. 17th century. H. $5\frac{1}{2}$ in., diam. top, 5 in. Bought, with No. 78, 3*l*. 15*s*.

3. '71.

CUP with Cover. Glaſs, engraved with dancing amorini holding vine branches laden with grapes; the handle of the cover of gilt metal enamelled; the interior button enamelled with the arms of an archbiſhop of Trèves, with the inſcription, "Joan. Hvgo. D. G. Arc. Trev. PR. EL. EP. SP." (1676-1711.) German. H., including cover, $6\frac{3}{4}$ in., diam. $3\frac{1}{2}$ in. 21*l*.

3349. '56.

CUP. Purple glaſs. Painted with flowers, &c. in white enamel. French or German. 18th century. H. 2 in., diam. $3\frac{1}{4}$ in. 5*s*.

464. '73.

DRINKING Cup. Glafs, opalifed; the bowl white, the stem (which is baluster shape) and foot of a bluish shade. German. 17th century. H. $8\frac{7}{8}$ in., diam. of mouth, $3\frac{7}{8}$ in. 2*l.* 10*s.*

241. '72.

DRINKING Glafs. Plain glafs, cylindrical, tall, with expanded foot, enamelled with two coats of arms, a gilt inscription, Jerg Spaifer, Felizita Schneeweisin, and the date 1568. One of the coats of arms has a wolf with a joint of meat in his mouth, canting heraldry for the name "Spaifer," *i.e.*, Eater. Bohemian. H. $10\frac{7}{8}$ in., diam. base, $5\frac{1}{8}$ in. 6*l.*

244. '72.

DRINKING Glafs with Cover. Plain glafs, painted in dark brown with a double shield of arms and landscapes. Initialled "I. L. F. f." and dated 1680. German. H. $6\frac{1}{4}$ in., diam. top, $3\frac{1}{4}$ in. 4*l.*

54. '72.

DRINKING Glafs. Painted in black with a burning heart upon an altar within a medallion, flowers, and a quotation from Solomon's Song. German (Nuremberg). 17th century. H. $2\frac{1}{4}$ in., diam. top, $2\frac{1}{8}$ in. 1*l.* 5*s.*

1903*d.* '55.

DRINKING Glafs. Painted in brown, with landscape and buildings. German. 17th century. H. $2\frac{5}{8}$ in., diam. $2\frac{5}{8}$ in. (Bernal Collection.) 1*l.*

1903*f.* '55.

DRINKING Glafs. On ball feet. Painted in brown, with medallions, in one of which a figure of Mars, in

the other of Law and Art, and the inſcriptions, "Mars will jezund triumphiren, Lex und Ars die exuliren," *i.e.*, Mars will now triumph, (and) exile Law and Art. German. 17th century. H. $3\frac{1}{8}$ in., diam. $2\frac{5}{8}$ in. (Bernal Collection.) 1*l.*

1879. '55.

DRINKING Glaſs. Enamelled. With coloured flowers and German inſcriptions. German. 17th century. H. $2\frac{1}{2}$ in., diam. $2\frac{3}{4}$ in. (Bernal Collection.) 3*l.* 5*s.*

1879*a.* '55.

DRINKING Glaſs. Enamelled. With birds and flowers in white enamel, outlined in black. German. 17th century. H. 2 in., diam. $1\frac{7}{8}$ in. (Bernal Collection.) 3*l.* 5*s.*

1881. '55.

DRINKING Glaſs. Cylindrical. With two eſcutcheons of arms enamelled in colours, and with gilt imbricated margin. German. 17th century. H. $10\frac{1}{4}$ in., diam. $4\frac{5}{8}$ in. (Bernal Collection.) 2*l.* 2*s.*

1903. '55.

DRINKING Glaſs. On ball feet. Enamelled in brown, with a figure of St. Bartholomew, and background of buildings and inſcriptions. German. 17th century. H. $3\frac{3}{4}$ in., diam. 3 in. (Bernal Collection.) 1*l.*

1903*a.* '55.

DRINKING Glaſs. On ball feet. Enamelled in brown, with claſſical landscape. German. 17th century. H. $3\frac{1}{2}$ in., diam. 3 in. (Bernal Collection.) 1*l.*

1903b. '55.

DRINKING Glafs. Enamelled in brown, with the subject of Mofes and the burning bufh. German. 17th century. H. $2\frac{3}{4}$ in., diam. $2\frac{3}{4}$ in. (Bernal Collection.) 1*l*.

1903c. '55.

DRINKING Glafs. Enamelled in brown, with a fox-hunting fcene. German. 17th century. H. $2\frac{3}{4}$ in., diam. $2\frac{3}{4}$ in. (Bernal Collection.) 1*l*.

95. '53.

DRINKING Glafs. Enamelled in various colours. With portraits of a miner of the Hartz foreft and his wife, and with a German infcription relating to the perils and achievements of a miner's calling, and date 1671. German. H. $9\frac{1}{2}$ in., diam. 5 in. 2*l*. 12*s*. 6*d*.

565. '53.

DRINKING Glafs and Cover. Light green glafs. Enamelled with a coat of arms and the date 1619. German. H. $6\frac{1}{2}$ in., diam. $2\frac{3}{4}$ in. (Bandinel Collection.)

1857. '55.

DRINKING Glafs. Bell-fhaped glafs mounted in filver. The mounting represents an armillary fphere, which enclofes a die, and is furmounted by a fmall ftatnette of Fortune. German (?). 17th century. H. $8\frac{3}{4}$ in., diam. $3\frac{1}{2}$ in. (Bernal Collection.) 8*l*.

466. '73.

DRINKING Glafs with Cover. Plain glafs, the body girded by two fnake-like bands, and provided with

concavities to receive the fingers, the cover having three raised ornaments reſembling raspberries, and a baluſter-shaped handle. German. 18th century. H., including cover, $11\frac{3}{8}$ in., diam. of body, $5\frac{1}{4}$ in. 1*l.* 10*s.*

1271. '72.

DRINKING Glaſs. Tumbler ſhape. It is formed by two layers of glaſs, one of which is etched in gold leaf with a group of S. George and the Dragon, foliated ſcrolls, feſtoons, and arabesques. The bottom is coloured red, and etched in gold with the ſacred monogram, I.H.S., and the legend, "Benedictum ſit nomen domini." The outſide is cut perpendicularly in facets. German. Early 18th century. H. $3\frac{1}{4}$ in., diam. at mouth, $2\frac{3}{4}$ in. 1*l.* 10*s.*

1272. '72.

DRINKING Glaſs. Tumbler ſhape. It is formed by two layers of glaſs, between which is gold leaf etched with men firing at deer in a landſcape with claſſical ruins. The bottom is coloured red, and etched in gold with a running hare. The outſide is cut perpendicularly in facets. German. Early 18th century. H. $3\frac{1}{2}$ in., diam. at mouth, $2\frac{3}{4}$ in. 1*l.* 10*s.*

1330. '72.

FLASK. Blue glaſs, moulded, with raised figures of animals and trees on both ſides. German. 18th or 19th century. H. $7\frac{1}{4}$ in., W. 4 in. 4*s.*

1350. '72.

FLASK. Clear glaſs, barrel ſhape, with notched hoops, four feet (pierced for cords to paſs through), and a ſcrew

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metal bung. German. Early 18th century. L. $8\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. 5*l.*

911. '64.

FLASK. With screw stopper. White glass, with blue and red flowers. A travelling flask. Dutch. 18th century. H. 5 in., W. $2\frac{1}{4}$ in. Given by the Rev. R. Brooke.

242. '72.

GOBLET with Cover. Green glass, engraved with wreaths and the question "Vita quid est hominum?" with silver-gilt openwork foot; on the cover is a silver-gilt figure of a dog standing on his hind legs, on whose collar are the initials I. A. V., and the date 1656. Bohemian. H. 10 in., diam. base, $3\frac{1}{2}$ in. 10*l.*

1835. '55.

GOBLET and Cover. Glass. The bowl painted with landscapes and architectural subjects in black, among them two rows of cedars; below, in very small figures, the date 1690. In front an oval medallion with the motto, Die Cedern dauren allezeit, so ihren Gluck in Leid und Freud; *i.e.*, The cedars last for ever, so may your good luck in woe and joy. German. 17th century. H. $12\frac{5}{8}$ in., diam. $4\frac{7}{8}$ in. (Bernal Collection.) 3*l.*

9021. '63.

GOBLET. Glass. On three feet, with cover, ornamented with landscape in brown etching, by John Schaper. German. Dated 1668. H., with cover, 7 in., diam. $3\frac{3}{4}$ in. 5*l.* 16*s.* 8*d.*

355. '76.

GOBLET with Cover. Clear glass, faceted, with an etching in gold leaf of a bear-hunt, and floral scrolls, introduced between two surfaces of glass. Dutch or German. Second half of 17th century. H. $9\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. 5*l.*

1901. '55.

GOBLET and Cover. The bowl and foot in green glaſs, the ſtem, &c. in white. The bowl engraved with a frieze of dancing cupids, perſonifying the four elements, with inſcriptions. German. 17th century. H. $15\frac{1}{2}$ in., diam. $5\frac{1}{2}$ in. (Bernal Collection.) 3*l.* 3*s.*

1899. '55.

GOBLET and Cover. Cut glaſs. In front is engraved an eſcutcheon of arms furmounted by a coronet; ſtem and margin of the bowl and cover enriched with gilded bands. Bohemian. 17th century. H. 13 in., diam. $4\frac{1}{2}$ in. (Bernal Collection.) 1*l.*

1834. '55.

GOBLET and Cover. Glaſs. With engraved and gilded arabefque ornaments, and a medallion furmounted by a coronet, and containing an interlaced cypher; at the back a German inſcription. German. 17th century. H. $12\frac{5}{8}$ in., diam. $4\frac{1}{8}$ in. (Bernal Collection.) 3*l.* 5*s.*

1900. '55.

GOBLET and Cover. Cut glaſs, engraved with arabefques. Bohemian. 17th century. H. $12\frac{3}{4}$ in., diam. $4\frac{5}{8}$ in. (Bernal Collection.) 4*l.* 10*s.*

6898. '60.

GOBLET and Cover. Clear glaſs, on tall ſtem, the whole ſurface cut into hexagonal facets. Bohemian. 18th century. H. 14 in., diam. 6 in. 14*s.*

6899. '60.

GOBLET and Cover. Clear glafs, on tall ſtem, facet-cut, and engraved. Bohemian. 18th century. H. $14\frac{3}{4}$ in., diam. $5\frac{1}{4}$ in. 14s.

6903. '60.

GOBLET and Cover. Clear glafs, elliptic form, on circular foot, engraved with rococo ſcrollwork, flowers, fruit, &c., with a German inſcription, the rims enriched with gilt bands. German. 18th century. H. $9\frac{1}{4}$ in., diam. $3\frac{1}{4}$ in. 1/. 8s.

66. '53.

GOBLET and Cover. Cut and engraved cryſtal glafs, ſome red ſpiral lines in the ſtem. Bohemian or Dutch. 18th century. H. $8\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. 6s.

572. '72.

GOBLET. Plain glafs, decorated with a ſhield of arms and the initials G. S., flower ſcrolls, and a German inſcription, in black and white enamel. German. Dated 1711. H. $5\frac{1}{4}$ in., diam. at top, $4\frac{1}{4}$ in. 4/.

The inſcription is badly ſpelt, and in parts hardly legible. It begins (translated). "If a good friend comes in here I ſet before him a bit of bread and a glafs of beer."

520. '72.

GOBLET with Cover. White glafs, cut with groups of children playing muſical inſtruments and gathering grapes; on the cover a wreath of flowers and fruits. German (?). 18th century. H. $8\frac{1}{4}$ in., diam. at top, $4\frac{3}{4}$ in. 4/.

6901. '60.

GOBLET and Cover. Clear cut glafs, with red latticinio work in the top of the cover and in the stem. German. 18th century. H. $10\frac{1}{2}$ in., diam. $4\frac{1}{8}$ in. 16s.

1875. '55.

GOBLET and Cover. Cut ruby glafs. Bohemian. 18th century. H. 13 in., diam. 4 in. (Bernal Collection.) 2l. 2s.

71. '53.

GOBLET and Cover. Old Bohemian cut glafs. Within a cartouche is engraved a view of Breslau, and on the opposite side is a shield of arms surmounted by a coronet. German. First half of 18th century. H. $11\frac{1}{4}$ in., diam. 4 in. 10l.

Probably engraved at Breslau (Introduction, p. cxxvi.)

6900. '60.

GOBLET and Cover. Clear glafs, engraved with a shield of arms, and a German inscription on riband scroll. German. 18th century. H. 12 in., diam. $4\frac{1}{2}$ in. 19s.

Ein jeder Singt dein Lob preift deine Redlichkeit.

Ich stimme auch mit ein, warum der auspruch mich erfreut, *i.e.*, "Every one sings thy praise, commends thy integrity. I join in because the expression (*i.e.* of such sentiments) delights me."

243. '72.

JAR or Drinking Vessel. Green glafs, with wide mouth, pointed lobes of glafs attached to the body. German. 16th century. H. $7\frac{3}{8}$ in., diam. 4 in. 4l.

1908. '55.

JUG. Glafs, with pewter cover, enamelled in various colours; in the centre a man and woman holding up an escutcheon and inscriptions, among which the name Hanns Neithart and date 1661. German. Dated 1661. H. $9\frac{1}{2}$ in., W. 5 in. by $4\frac{3}{4}$ in. (Bernal Collection.) 5*l*.

1843. '55.

JUG. Light green glafs, with cover, enamelled with the subject of Christ and the Woman of Samaria. German. Dated 1652. H. $12\frac{3}{8}$ in., W. $6\frac{1}{4}$ in. by 6 in. (Bernal Collection.) 9*l*. 15*s*.

1880. '55.

JUG. Enamelled glafs, in various colours, with floriated ornaments, an "Agnus Dei," and inscription, "Siehe dafs ist Gottes Lamb dafs der Weld finde dregt" (?), *i.e.*, See, this is the Lamb of God which taketh away the sins of the world. German. Dated 1668. H. $7\frac{1}{2}$ in., W. $5\frac{1}{2}$ in. by 5 in. (Bernal Collection.) 5*l*. 10*s*.

1882. '55.

JUG. Enamelled glafs. A cavalier pledging a lady, with the name Hans Gafman, and the inscription, "Drinck " mich aufs und sturtz mich umb dafs ich balt an zinn " andern komm," *i.e.*, Drink me out and turn me up, so that I may quickly come to another. German. Dated 1655. H. 10 in., W. $6\frac{1}{2}$ in. by $5\frac{1}{2}$ in. (Bernal Collection.) 9*l*. 10*s*.

571. '72.

JUG. Plain glafs, enamelled with coloured decoration. German. 17th or early 18th century. H. $6\frac{1}{4}$ in., diam. 4 in. 4*l*. 10*s*.

470. '73.

JUG. Glaſs, the neck and foot ribbed, the handle carried into the inſide and forming a ſyphon; on the top and the handle is applied ornament. German. 18th century. H. $8\frac{3}{4}$ in., diam. 4 in. 1*l.* 10*s.*

1847. '55.

MUG or Tankard and Cover. Glaſs, engraved with ſtrap-work, arabefques, &c. Bohemian. 17th century. H. 8 in., W. $5\frac{1}{4}$ in. by 4 in. (Bernal Collection.) 11*l.*

A very good example of work of this deſcription.

1898. '55.

MUG or Tankard. In ſemi-opaque white glaſs. Enamelled with cartouche work, &c. in red and black; medallion in front with Cupid aſleep; ſilver-gilt cover. German. 1680. H. $9\frac{3}{4}$ in., W. $5\frac{5}{8}$ in. by $5\frac{1}{8}$ in. (Bernal Collection.) 4*l.* 10*s.*

6938. '60.

PANE. Clear glaſs, cut in intaglio with a bear; in the centre the date 1619 ſurmounted by a crown and monogram. German. H. 9 in., W. $7\frac{3}{8}$ in. Given by H.R.H. the Prince Conſort.

This and the two following numbers were probably made to be ſilvered like mirrors; many examples may be found both in Germany and in Italy about this period, particularly in the latter country at Naples, generally the art ſhown in ſuch works is remarkably bad. Theſe are very far ſuperior to the average.

6939. '60.

PANE. Clear glaſs, cut in intaglio, with a tree and various animals, and the date 1620. German. H. 9 in., W. $7\frac{3}{8}$ in. Given by H.R.H. the Prince Conſort.

6940. '60.

PANE. Clear glaſs, cut in intaglio, with the ſubject of Perſeus and Andromeda. In the upper part are two ſhields of arms bearing initials. German. 17th century. H. 9 in., W. $7\frac{1}{4}$ in. Given by H.R.H. the Prince Conſort.

1868. '55.

PLATE. Dark purple glaſs, etched with bouquets of flowers, and two coats of arms, with initials. German (?). Dated 1613. H. 1 in., diam. 9 in. (Bernal Collection.) 3*l.* 7*s.*

568. '72.

STAFF of Commander. Opaliſed glaſs, ſpirally fluted, ſurmounted by the arms of Imhoff (a winged orb, on which reſts a monſter, half lion, half fiſh), in ſilver-gilt; in leather caſe. German. 18th century (?). L. $18\frac{1}{2}$ in. 10*l.*

465. '73.

TANKARD. Opaliſed glaſs body and handle, of bluifh green ſhade, with pewter lid, engraved with the initials B. M., and the date 1670 within a wreath. German. 17th century. H. $8\frac{3}{8}$ in., diam. at bottom 5 in. 1*l.* 10*s.*

97. '53.

TANKARD and Cover. Dark purple glass. With margin and lateral bands of arabesque ornament in white enamel and gold. German. 18th century. H. 7 in. W. $5\frac{1}{2}$ in. by $4\frac{1}{8}$ in. 7s. 6d.

245. '72.

TUMBLER. Formed of two layers of glass, with ornament between them of bands of leaves etched in silver, and scenes from the chace in gold. German. Late 17th or early 18th century. H. $2\frac{7}{8}$ in., diam. top, $2\frac{5}{8}$ in. 2l.

468. '73.

TUMBLER. Glass, enamelled with military trophies, the arms of Augustus King of Poland, and Elector of Saxony (1670-1733), garlands, and the letters F. A. R. P. E. S. German. Early 18th century. H. $3\frac{7}{8}$ in., diam. $2\frac{3}{4}$ in. 1l. 10s.

1858. '55.

VASE and Cover. Glass. Globular, with raised bosses in blue, green, and purple glass, which project both externally and internally, etched with two coats of arms. German. Dated 1643. H. $7\frac{3}{4}$ in., diam. $3\frac{3}{4}$ in. (Bernal Collection.) 8l.

469. '73.

WIEDERKOM (*i.e.*, a large goblet which could not be drained at one draught, and therefore obliged the drinker "wieder kommen," to come again). Cylindrical body, enamelled with the Eagle of the Holy Roman Empire, bearing on its pinions the shields of various German states, cities,

97. '53.

TANKARD and Cover. Dark purple glaſs. With margin and lateral bands of arabefque ornament in white enamel and gold. German. 18th century. H. 7 in., W. $5\frac{1}{2}$ in. by $4\frac{1}{8}$ in. 7s. 6d.

245. '72.

TUMBLER. Formed of two layers of glaſs, with ornament between them of bands of leaves etched in ſilver, and ſcenes from the chaſe in gold. German. Late 17th or early 18th century. H. $2\frac{7}{8}$ in., diam. top, $2\frac{5}{8}$ in. 2l.

468. '73.

TUMBLER. Glaſs, enamelled with military trophies, the arms of Auguſtus King of Poland, and Elector of Saxony (1670-1733), garlands, and the letters F. A. R. P. E. S. German. Early 18th century. H. $3\frac{7}{8}$ in., diam. $2\frac{3}{4}$ in. 1l. 10s.

1858. '55.

VASE and Cover. Glaſs. Globular, with raiſed boſſes in blue, green, and purple glaſs, which project both externally and internally, etched with two coats of arms. German. Dated 1643. H. $7\frac{3}{4}$ in., diam. $3\frac{3}{4}$ in. (Bernal Collection.) 8l.

469. '73.

WIEDERKOM (*i.e.*, a large goblet which could not be drained at one draught, and therefore obliged the drinker "wieder kommen," to come again). Cylindrical body, enamelled with the Eagle of the Holy Roman Empire, bearing on its pinions the ſhields of various German ſtates, cities,



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&c., an inscription, and the date 1673. German. 17th century. H. $9\frac{5}{8}$ in., diam. $6\frac{1}{8}$ in. 15*l*.

1839. '55.

WIEDERKOM. Clear glafs. With raised lateral bands, and with German inscriptions, wreaths of leaves, &c., in white enamel. German. 17th century. H. 12 in., diam. $5\frac{1}{4}$ in. (Bernal Collection.) 4*l*.

Vivat, trinck in gefund heit mein und dein,

Sollen die Päfs aus getruncken fein,

Aus treuen herzen trinck frisch herrumb.

i.e., Vivat, drink to my health and yours, let the meafures be drunk out, with a true heart drink quickly around.

1842. '55.

WIEDERKOM. Clear glafs. Enamelled with a representation of the cooper's trade in compartments. Inscribed "Hieronymus Fiffcher." German. Dated 1616. H. 12 in., diam. $5\frac{1}{8}$ in. (Bernal Collection.) 8*l*. 15*s*.

(See Plate XIX.)

1844. '55.

WIEDERKOM. Glafs. Enamelled with the name Roccho Grasl and merchant's mark. German. Dated 1603. H. $10\frac{1}{2}$ in., diam. $4\frac{5}{8}$ in. (Bernal Collection.) 1*l*. 15*s*.

1845. '55.

WIEDERKOM. Dark blue glafs. Enamelled with a huntsman shooting a stag; at the back a lily, in proper colours. German. Dated 1601. H. $6\frac{3}{4}$ in., diam. $4\frac{1}{8}$ in. (Bernal Collection.) 4*l*.

574. '54.

WINE Glaſs. Engraved with emblems in medallions, accompanied with inſcription. German or Bohemian. 17th century. H. $13\frac{3}{8}$ in., diam. $4\frac{3}{8}$ in. 5s. 6d.

575. '52.

WINE Glaſs. Clear glaſs. Engraved and inſcribed "Van Grenadiers Vrycorps, Rotterdam." Dutch. 18th century. 5s.

1838. '55.

WINE Glaſs. Green glaſs. Cylindrical. Studded with knobs. German. 16th century. H. 9 in., diam. $4\frac{1}{8}$ in. (Bernal Collection.) 10s.



SECTION VIII.—ENGLAND (EARLY ANGLO-SAXON PERIOD.)

1314. '70.



BOWL. Glafs. Amber colour. The upper part of the exterior furrounded by flightly raifed threads, on the lower a wavy corded pattern. Anglo-Saxon. H. $4\frac{1}{2}$ in., diam. 5 in. (Gibbs Bequest.)

1315. '70.

BOWL. Glafs. Green. Wide mouthed and footlefs, flightly ribbed, the bottom covered with a raifed crofs and pellets. Anglo-Saxon. H. $3\frac{1}{4}$ in., diam. at top, $4\frac{1}{2}$ in. (Gibbs Bequest.)

1316, 1317. '70.

BOWLS (two). Portions. Glafs. Greenifh olive. Anglo-Saxon. H. $2\frac{1}{2}$ in., diam. $3\frac{3}{4}$ in. and $3\frac{1}{2}$ in. (Gibbs Bequest.)

1327. '70.

BOTTLE. Glafs. Green, wide mouthed. Anglo-Saxon. H. 3 in., diam. of top, 2 in. (Gibbs Bequest.)

1328. '70.

BOTTLE. Glafs. Iridescent furface, wide mouthed. Anglo-Saxon. H. 3 in., diam. of top, 2 in. (Gibbs Bequest.)

1329. '70.

BOTTLE. Glaſs. Iriſcent ſurface, wide mouthed
Anglo-Saxon. H. 3 in., diam. of top, $1\frac{7}{8}$ in. (Gibbs
Bequeſt.)

1330. '70.

BOTTLE. Glaſs. Iriſcent ſurface, wide mouthed.
Anglo-Saxon. H. $2\frac{3}{4}$ in., diam. of top, 2 in. (Gibbs
Bequeſt.)

1331. '70.

BOTTLE. Glaſs. Waved ſurface, wide mouthed (cracked).
Anglo-Saxon. H. $2\frac{1}{4}$ in., diam. of top, $1\frac{3}{4}$ in. (Gibbs
Bequeſt.)

1332. '70.

BOTTLE. Glaſs. Waved ſurface, wide mouthed (cracked).
Anglo-Saxon. H. $2\frac{1}{8}$ in., diam. of top, $1\frac{3}{4}$ in. (Gibbs
Bequeſt.)

1333. '70.

BOTTLE (portions of, much broken). Glaſs. Olive,
with iriſcent ſurface, and concentric threads round
the neck, wide mouthed. Anglo-Saxon. H. 3 in., diam. of top,
2 in. (Gibbs Bequeſt.)

1322, 1322a. '70.

BOTTLES (two). Glaſs. Blue, wide mouthed, globular,
with concentric threads round the neck. Anglo-
Saxon. H. 3 in., diam. of tops, $1\frac{7}{8}$ in. and 2 in. (Gibbs
Bequeſt.)

1323, 1323a. '70.

BOTTLES (two). Glaſs. Blue, wide mouthed, globular,
plain. Anglo-Saxon. H. 3 in.; (a) $3\frac{1}{4}$ in.; diams.
2 in. (Gibbs Bequeſt.)

PLATE XX.



ANGLO-SAXON DRINKING CUPS.
(1319, 1321. '70.)

1324. '70.

BOTTLE. Glafs. Blue, wide mouthed, plain. Anglo-Saxon. H. $2\frac{3}{8}$ in., diam. of top, $1\frac{1}{2}$ in. (Gibbs Bequest.)

1325, 1325a. '70.

BOTTLES (two). Glafs. Green, wide mouthed, waved surface. Anglo-Saxon. H. $3\frac{1}{8}$ in. and $3\frac{1}{4}$ in., diam. in. (Gibbs Bequest.)

1326. '70.

BOTTLE. Glafs. Iridescent, wide mouthed, globular, with concentric threads round the neck. Anglo-Saxon. H. $3\frac{1}{4}$ in., diam. of top, 2 in. (Gibbs Bequest.)

1313, 1313a. '70.

CUP (and fragments of another). Glafs. Small, narrow, opaque blue streaked with white festoons, with narrow white bands at top and bottom. Analogous to Saxon, but probably late Roman. H. $3\frac{1}{2}$ in. (Gibbs Bequest.)

1334. '70.

CUP. Glafs. Olive, waved and iridescent surface, wide mouth. Anglo-Saxon. H. 3 in., diam. of top, $1\frac{3}{4}$ in. (Gibbs Bequest.)

1335. '70.

CUP (top and base of). Glafs. Green, with concentric threads round the upper part; broken. Anglo-Saxon. Diam. of top, 3 in. (Gibbs Bequest.)

1306. '70.

CUP. Glaſs. Light green, with wide mouth, the bowl expanding and contracting downwards to a ſmall foot. Anglo-Saxon. H. $3\frac{3}{4}$ in., diam. of top, $3\frac{1}{8}$ in. (Gibbs Bequeſt.)

1319. '70.

DRINKING Cup (portions of). Glaſs. Olive colour, footleſs; covered externally with a kind of network pattern, ſurmounted by a broad, irregular band. Anglo-Saxon. H. $5\frac{1}{2}$ in., diam. at top, 4 in. (Gibbs Bequeſt.)

(See Plate XX., fig. 1.)

1320. '70.

DRINKING Cup. Glaſs. Green; with ſpiral threads at the top. Anglo-Saxon. H. $5\frac{1}{2}$ in., diam. at top, $2\frac{5}{8}$ in. (Gibbs Bequeſt.)

1321, 1321a. '70.

DRINKING Cups (two). Glaſs. Ornamented by rude, jagged bands running from near the mouth to the bottom, where they converge. They are footleſs, and muſt have been emptied before being relaid upon the table. Anglo-Saxon. H. $8\frac{1}{2}$ in.; diam. at mouth, $3\frac{1}{8}$ in. (Gibbs Bequeſt.)

(See Plate XX., fig. 2.)

1336 to 1336b. '70.

DRINKING Cups (fragments of). Glaſs. Blue, green, and olive, covered on the exterior with hollow funnel-shaped boſſes. Anglo-Saxon. (Gibbs Bequeſt.)

1337 to 1337j. '70.

DRINKING Cups and Bottles (fragments of). Glafs. Some with concentric threads round the necks; of various colours and dimensions. Anglo-Saxon. (Gibbs Bequest.)

1338. '70.

DRINKING Cup (fragments of). Glafs. Conical; smoke coloured. Anglo-Saxon. Diam. of mouth, 4 in. (Gibbs Bequest.)

1318. '70.

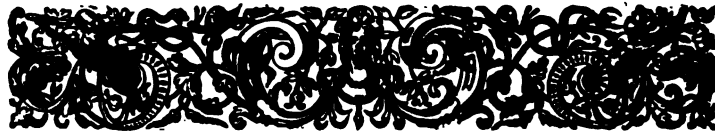
DRINKING Cup. Glafs. Footless. Anglo-Saxon. H. $2\frac{1}{3}$ in., diam. $4\frac{3}{8}$ in. (Gibbs Bequest.)

1339. '70.

ROD (portion of). Glafs. Opaque, spiral; possibly part of a hair-pin. Anglo-Saxon. L. $2\frac{1}{8}$ in. (Gibbs Bequest.)

1309. '70.

VESSEL, a fragment. Glafs. The lower part only, light green and ribbed. Anglo-Saxon. Diam. of base, $2\frac{3}{4}$ in. Gibbs Bequest.)



SECTION IX.—ENGLAND.

694. '68.



BOTTLE (broken). Dark blue glass. Cut in quatrefoil diamond squares. English (Bristol). Late 18th century. H. $13\frac{1}{2}$ in., diam. $7\frac{1}{2}$ in. 1*l.* 10*s.*

1340. '70.

DRUG Bottle. Glass. Small, square, and narrow-mouthed, probably an apothecary's. English. Mediæval (?). H. $1\frac{3}{4}$ in., diam. $1\frac{1}{4}$ in. (Gibbs Bequest.)

573. '54.

JUG. Green glass, with waves of latticino. English. 17th century. H. $6\frac{1}{4}$ in., diam. $4\frac{1}{4}$ in. 12*s.*



SECTION X.—GLASS OF CHINA.

302. '64.

BOWL. Opaque, pale yellow glass. With red base and margin. Chinese. H. 3 in., diam. $6\frac{3}{4}$ in. 11/. 11s.

359. '54.

CUP (two-handled). Green glass. In imitation of jade Chinese. H. $1\frac{7}{8}$ in., W. 4 in. 10s. 6d.

2160. '55.

CUP (two-handled). In marbled crimson and green glass; moulded with ornaments in relief. Chinese. H. $2\frac{1}{2}$ in., W. $5\frac{1}{2}$ in. by $2\frac{7}{8}$ in. (Bernal Collection.) 1/. 11s. 6d.

On the sides is the character "Foo," Happiness. See illustration on next page.

7. '71.

SCENT Bottle. Semi-opaque white and red, the upper or red stratum carved in grotesque animal forms, with red glass stopper. From the Summer Palace, Pekin. Chinese. H., including stopper, 3 in., W. $2\frac{1}{4}$ in. Given by Mrs. Frances J. Broadley.

653. '69.

VASE, yellow, femi-opaque glafs, described as pure porcelain enamel, fuch as is used in the Imperial Manufactory. Chinefe. H. $8\frac{1}{2}$ in., diam. $5\frac{1}{4}$ in. (Paris Exhibition, 1867.) 48/.

On the bafe is incised the mark of the period, Keen-lung, A.D. 1736-1795.

103. '53.

VASE. Yellow femi-opaque glafs. Globular; fupported on three legs. Chinefe. H. $3\frac{3}{4}$ in., diam. $3\frac{1}{4}$ in. 14s.

104. '53.

VASE or Bottle. Yellow femi-opaque glafs. Chinefe. H. $4\frac{1}{2}$ in., W. $1\frac{3}{4}$ in. 14s.





APPENDIX.

GLASS OF EUROPE OF 19TH CENTURY.

AUSTRIA, BOHEMIA, AND HUNGARY.

617. '69.



BOWL. Cut glass. With gilt ornamental border; bought as an example of cheapness of manufacture. Austrian. About 1865. H. 5 in., diam. $10\frac{1}{8}$ in. (Paris Exhibition, 1867.) 1*l.* 8*s.*

614, 614. '69.

CANDLESTICKS, a pair. Engraved glass and gilt metal; bought as an example of cheapness of manufacture. Austrian. About 1865. H. 9 in., diam. of base, $4\frac{3}{8}$ in. (Paris Exhibition, 1867.) 2*l.* 16*s.*

627. '69.

DECANTER and Stopper. Glass. Cut and engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $11\frac{1}{2}$ in. (Paris Exhibition, 1867.) 1*l.* 16*s.*

612. '69.

DISH on Stand. Engraved glass and gilt metal; bought as an example of cheapness of manufacture. Austrian. H. $7\frac{3}{8}$ in., W. $13\frac{1}{4}$ in. (Paris Exhibition, 1867.) 4*l.*

613. '69.

DISH. Engraved glaſs. Four-lobed, mounted in gilt metal; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $12\frac{1}{8}$ in., W. $14\frac{7}{8}$ in. (Paris Exhibition, 1867.) 5*l*.

616. '69.

DISH, with Cover and Plate. Cut glaſs. With gilt ornamental border; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $9\frac{1}{2}$ in., diam. $7\frac{1}{2}$ in. (Paris Exhibition, 1867.) 1*l*. 15*s*.

618. '69.

DISH. On foot. Cut glaſs. With gilt ornamental border. Bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $2\frac{1}{4}$ in., diam. $8\frac{7}{8}$ in. (Paris Exhibition, 1867.) 14*s*.

7937. '62.

DISH. Glaſs, circular. The lower ſurface crackled and luſtred, the outer rim gilt. Hungarian. About 1860. Diam. $12\frac{1}{4}$ in. (International Exhibition, 1862.) 1*l*. 11*s*.

611, 611*a*. '69.

DRINKING Glaſſes, a pair. On the front of each is a heraldic device, at the back a flower, painted in embossed colours. Auſtrian. About 1865. H. $9\frac{5}{8}$ in., diam. o. baſe, 4 in. (Paris Exhibition, 1867.) 2*l*.

628. '69.

GOBLET. Glaſs. Cut and engraved. Bought as an example of cheapneſs of manufacture. Auſtrian. About 1867. H. $4\frac{3}{4}$ in. (Paris Exhibition, 1867.) 12*s*.

631. '69.

GOBLET. Glas. Engraved. Bought as an example of cheapness of manufacture. Austrian. About 1867. H. 5 in., diam. at base, $2\frac{3}{4}$ in. (Paris Exhibition, 1867.) 14s.

639. '69.

GOBLET. Glas. Lobed and engraved. Bought as an example of cheapness of manufacture. Austrian. About 1867. H. $5\frac{1}{8}$ in., W. 3 in. (Paris Exhibition, 1867.) 9s.

623. '69.

INKSTAND. Cut glas, engraved, with gilt metal mountings; bought as an example of cheapness of manufacture. Austrian. About 1865. H. 8 in., diam. of plate, $7\frac{1}{8}$ in. (Paris Exhibition, 1867.) 2l. 10s.

610. '69.

JUG and Cover. Glas. The front painted with an eagle, on which are medallions with the heads of the kings of Poland from 550 to 1614, (perhaps a copy of an earlier original), and Latin inscription. Austrian. About 1865. H. $22\frac{1}{2}$ in., diam. of base, $5\frac{1}{2}$ in. (Paris Exhibition, 1867.) 3l.

624. '69.

MATCH Stand. Cut glas. Engraved and mounted in gilt metal; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $5\frac{1}{2}$ in., diam. of plate, $5\frac{1}{8}$ in. (Paris Exhibition, 1867.) 1l. 8s.

620. '69.

PLATE. Cut glaſs. With ornamental border in embossed gold; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. Diam. $8\frac{3}{4}$ in. (Paris Exhibition, 1867.) 1*l.* 2*s.*

621. '69.

PLATE, with Cover. Cut glaſs. With ornamental border in embossed gold; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. with cover, 6 in., diam. $9\frac{1}{4}$ in. (Paris Exhibition, 1867.) 3*l.* 4*s.*

622. '69.

PLATE, with Cover. Cut glaſs. With gilt ornamental border; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. with cover, $5\frac{7}{8}$ in., diam. $9\frac{1}{4}$ in. (Paris Exhibition, 1867.) 1*l.* 11*s.* 2*d.*

625. '69.

SCENT Bottle and Stopper. Cut glaſs. Engraved and mounted in gilt metal; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $5\frac{7}{8}$ in. (Paris Exhibition, 1867.) 1*l.* 12*s.*

626. '69.

SCENT Bottle. Cut glaſs. Engraved and mounted in gilt metal; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. 7 in. (Paris Exhibition, 1867.) 1*l.*

632. '69.

TAZZA. Glafs. Cut and engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $4\frac{5}{8}$ in., diam. 4 in. (Paris Exhibition, 1867.) 16s.

633. '69.

TAZZA. Glafs. Oval, cut, and engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $4\frac{1}{8}$ in., W. $4\frac{3}{4}$ in. (Paris Exhibition, 1867.) 7s.

634. '69.

TAZZA. Glafs. Lobed, cut, and engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $5\frac{1}{8}$ in. (Paris Exhibition, 1867.) 6s.

638. '69.

WINE Glafs. Ovate, lobed on twisted foot; bought as an example of cheapness of manufacture. Engraved. Austrian. About 1865. H. 5 in. (Paris Exhibition, 1867.) 3s. 7d.

640. '69.

WINE Glafs. Engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $5\frac{1}{8}$ in. (Paris Exhibition, 1867.) 4s.

629. '69.

WINE Glafs. Cut and engraved; bought as an example of cheapness of manufacture. Austrian. About 1865. H. $5\frac{7}{8}$ in. (Paris Exhibition, 1867.) 12s.

630. '69.

WINE Glaſs. Cut and engraved; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $6\frac{1}{4}$ in., W. $2\frac{1}{2}$ in. (Paris Exhibition, 1867.) 12s.

636. '69.

WINE Glaſs. On twiſted ſtem. Cut and engraved; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. $5\frac{1}{4}$ in., W. $2\frac{3}{4}$ in. (Paris Exhibition, 1867.) 6s.

637. '69.

WINE Glaſs. Six-lobed, engraved; bought as an example of cheapneſs of manufacture. Auſtrian. About 1865. H. 5 in. (Paris Exhibition, 1867.) 4s. 10d.

ENGLAND.

532. '54.

BOTTLE. Glaſs. Double handled, gilt, and engraved; imitation of 17th century work. Engliſh. 19th century. H. $10\frac{3}{4}$ in., diam. $6\frac{1}{2}$ in. 1/. 15s.

14. '65.

BOTTLE. Glaſs. For water; painted with a wreath of flowers and aquatic plants, called the "Well-fpring" bottle. Deſigned by R. Redgrave, R.A. Engliſh. (Sum-merly Art Manufactures, 1847.) H. $6\frac{1}{2}$ in., W. $4\frac{1}{4}$ in. Given by H. Cole, Eſq., C.B.

238. '66.

CHANDELIER. Glafs. Spirally fluted and ornamented with ruby and green leaves; also with bell-shaped and other pendants. Old Venetian style. English. (Messrs. Powell and Son.) About 1865. H. 4 ft. 4 in., W. 2 ft. 2 in. 24*l.* 10*s.*

372. '54.

DECANTER. Enamelled glafs. Designed by R. Redgrave, R.A.; manufactured by Richardson, of Stourbridge. English. (Part of the Summerly Art Manufactures, 1847.) H. 11½ in., diam. 5½ in. Given by H. Cole, Esq., C.B.

370. '54.

GOBLET. Enamelled glafs. Designed by R. Redgrave, R.A., and manufactured by Christie, Lambeth. (Part of the Summerly Art Manufactures, 1847.) H. 7¾ in., diam. 4 in. Given by H. Cole, Esq., C.B.

1193. '54.

GOBLET. Ruby glafs; cut and engraved. English. About 1850. H. 7⅝ in., diam. 4 in. 1*l.*

62. '52.

MILK Ewer. Clear glafs; plain, blown, and polished. English. About 1850. H. 3 in., W. 5¾ in. 6*s.* 6*d.*

369 '54.

VASE. Enamelled glafs. Designed by R. Redgrave, R.A., and manufactured by Christie, Lambeth. (Part

of the Summerly Art Manufactures, 1847.) H. $10\frac{1}{2}$ in., diam. 6 in. Given by H. Cole, Esq., C.B.

374^a. '54.

WINE Glaſs. With metal-wire leaf mounting to ſtem. Designed by R. Redgrave, R.A. (Part of the Summerly Art Manufactures, 1847.) H. $5\frac{1}{2}$ in., diam. $2\frac{1}{4}$ in. Given by H. Cole, Esq., C.B.

578. '54.

WINE Glaſs. Clear glaſs. Engliſh. (Bacchus & Co.) About 1850. H. $5\frac{1}{4}$ in., diam. $2\frac{1}{2}$ in. 1s.

579. '54.

WINE Glaſs. Clear glaſs, with engraved wreath. Engliſh. (Bacchus & Co.) About 1850. H. 5 in., diam. $2\frac{1}{2}$ in. 1s. 9d.

581. '54.

WINE Glaſs. Clear glaſs, with engraved bowl. Engliſh. (Bacchus & Co.) About 1850. H. $4\frac{5}{8}$ in., diam. $3\frac{5}{8}$ in. 12s. 6d.

105. '70.

WINE Glaſs for Champagne. Green glaſs. Spirally ribbed, ſtriped and flaked with white. By J. Leiceſter. Prize object from the Society of Arts' competition, 1869-70. Engliſh. 1869. H. $8\frac{1}{2}$ in. 1l. 5s.

FRANCE.

718. '69.

BOTTLE on Foot. Glafs. Green, with gilt and coloured ornament, the handle and head of stopper in white glafs. French. About 1865. H. with stopper, $13\frac{1}{2}$ in., diam. of base, $4\frac{1}{4}$ in. (Paris Exhibition, 1867.) 4*l*.

2718. '56.

BOX or Bonbonnière. Glafs. With encrusted floral decoration in silver, "Procédé intercrystal." French (Grichois, Paris). About 1855. H. 2 in., diam. 6 in. (Paris Exhibition, 1855.) 6*l*. 16*s*.

2719. '56.

SAUCER. Glafs. With encrusted arabesque decoration in silver, "Procédé intercrystal." French (Grichois, Paris). About 1855. Saucer, diam. $5\frac{3}{8}$ in. (Paris Exhibition, 1855.)

717. '69.

VASE. Glafs, green. With gilt and coloured enamel ornament. French. About 1865. H. $5\frac{1}{4}$ in., diam. $7\frac{1}{8}$ in. (Paris Exhibition, 1867.) 3*l*. 4*s*.

719. '69.

VASE. Glafs. Tazza-shaped, with moulded ribbed ornament and openwork stem. French. About 1865. H. 7 in., diam. $7\frac{1}{8}$ in. (Paris Exhibition, 1867.) 1*l*. 12*s*.

720. '69.

VASE, with Cover. Glaſs. Dark green, with gilt and coloured ornament, the handles and foot of gilt metal. French. About 1865. H. 1 ft. $4\frac{1}{2}$ in., W. $9\frac{1}{8}$ in. (Paris Exhibition, 1867.) 10*l*.

1777. '69.

VASE. Glaſs. Enamelled in interlaced deſign of gold and colours. By M. Brocard. French. About 1865. H. $7\frac{1}{2}$ in., diam. of baſe, $6\frac{7}{8}$ in. 7*l*. 4*s*.

56. '44.

VASE. Semi-opaque white glaſs. Enamelled and gilt, with a band or wreath of natural flowers in proper colours, ormolu handles, &c. French (La Roche & Co.). About 1840. H. 1 ft. $10\frac{3}{4}$ in., W. $17\frac{1}{2}$ in. by $13\frac{3}{4}$ in. 34*l*.

57. '44.

VASE or Amphora. Semi-opaque white glaſs. Cylindrical, enamelled with a wreath of wild flowers. French. About 1840. H. 24 in., diam. $8\frac{1}{4}$ in. 17*l*.

504. '69.

VASE. Glaſs. Bottle-shaped, painted with graſſes, water, and insects, to imitate an aquarium. French. About 1865. H. $7\frac{1}{4}$ in., diam. of baſe, $3\frac{1}{8}$ in. 1*l*.

GERMANY.

9020. '63.

DRINKING Glaſs. Bowl of white glaſs; foot of green with moulded ornament. German. 19th century. Deſigned by Schwanthaler. H. 11 in., diam. $5\frac{1}{4}$ in. 3*s*. 10*d*.

2679. '56.

EWER. Cut glafs. Enriched with circular bosses with gilt fillets. German (Steigerwald, Munich). About 1855. H. 10 in., diam. 6 in. (Paris Exhibition, 1855.) 1*l*.

2674. '56.

FLASK and Stopper. Frosted glafs, with bands of cut and gilt vine leaves. German (Steigerwald, Munich). About 1855. H. $8\frac{1}{2}$ in., diam. $3\frac{1}{4}$ in. (Paris Exhibition, 1855.) 8*s*.

2672. '56.

GOBLET or Cup (on tall stem). Crystal glafs. The bowl in coated blue and white glafs, elaborately engraved with a bacchanalian procession of cupids in intaglio. German (F. Steigerwald, Munich). About 1855. H. $12\frac{3}{4}$ in., diam. 8 in. (Paris Exhibition, 1855.) 14*l*, 16*s*, 9*d*.

9024. '63.

GOBLET and Cover. White glafs, with moulded green foot and knob. German. About 1860. H., with cover, $8\frac{7}{8}$ in., diam. 4 in. 2*s*, 5*d*.

2680. '56.

GOBLET. Cut glafs. Enriched with circular bosses with gilt fillets. German (Steigerwald, Munich). About 1855. H. $4\frac{1}{2}$ in., diam. $3\frac{3}{4}$ in. (Paris Exhibition, 1855.) 10*s*.

2681. '56.

GOBLET. Cut glafs. Enriched with circular bosses with gilt fillets. German (Steigerwald, Munich). About 1855. H. $4\frac{1}{2}$ in., diam. $3\frac{3}{4}$ in. (Paris Exhibition, 1855.) 10*s*.

9022, 9023. '63.

VASES (a pair). Opaque white glaſs. Bottle-shaped with flowers and leaves relieved in blue and green German (Sileſian). About 1860. H. $11\frac{1}{8}$ in., diam. $3\frac{3}{4}$ in. 4*l.* 1*s.* 4*d.*

2675, 2676. '56.

WINE Glaſſes (a pair). With froſted ruby bowls and green ſtems. German (Steigerwald, Munich). About 1855. H. $5\frac{1}{2}$ in., diam. $2\frac{1}{2}$ in. (Paris Exhibition, 1855.) 12*s.* 10*d.*

ROUMANIA.

949. '69.

MUG (two-handled). Glaſs. Pale blue. Roumanian. About 1865. H. $5\frac{5}{8}$ in., diam. $3\frac{7}{8}$ in. (Paris Exhibition, 1867.) 1*s.* 7*d.*

*RUSSIA.*997*a.* '69.

CANDLESTICK. Glaſs. White and gold ornament and imitation gems in glaſs. Ruſſian. About 1865. H. 9 in., diam. of baſe, 4 in. (Paris Exhibition, 1867.) 1*l.* 5*s.* 3*d.*

995*a.* '69.

VASE. Glaſs. White enamel and gold, with three coloured borders. Ruſſian. About 1865. H. $7\frac{1}{8}$ in., diam. $3\frac{1}{4}$ in. (Paris Exhibition, 1867.) 15*s.* 5*d.*

1002a. '69.

VASE. Glafs. Ornamented with flowers and geometric designs in gold and coloured enamel on opaque white ground. Russian. About 1865. H. 1 ft. $7\frac{3}{8}$ in., diam. 5 in. (Paris Exhibition, 1867.) 14*l*.

1000. '69.

TAZZA. Red opaque glafs, perhaps an imitation of rhodonite, or rose-coloured felspar. Russian. About 1865. L. $5\frac{1}{2}$ in., W. $4\frac{1}{4}$ in. (Paris Exhibition, 1867.) 4*l*. 4*s*.

SPAIN.

183. '71.

BOTTLE. Plain glafs, with double neck and partition throughout, two handles, and two necks; used to hold oil and vinegar. Spanish (Catalonia). 1870. H. $7\frac{5}{8}$ in., W. at bottom, $3\frac{1}{8}$ in. 6*d*.

184. '71.

BOTTLE. Plain glafs, with handle and curved spout. Spanish (Catalonia). 1870. H. $7\frac{1}{2}$ in., W. at bottom, $2\frac{1}{8}$ in. 4*d*.

149. '71.

BOTTLE. Plain glafs, bulbous body, with ring handle and curved spout. Spanish (Catalonia). 1870. H. 10 in., W. at bottom, $3\frac{1}{2}$ in. 1*s*. 2*d*.

150. '71.

BOTTLE. Plain glafs, bulbous body, with ring handle and curved spout. Spanish (Catalonia). 1870. H. 12 in., W. at bottom, $3\frac{3}{4}$ in. 1*s*. 6*d*.

151. '71.

BOTTLE. Plain glaſs, bulbous body, with ring hand and curved ſpout. Spaniſh (Catalonia). 1870. H. $8\frac{1}{8}$ in., W. at bottom, $3\frac{1}{4}$ in. 10*d*.

203. '71.

BOTTLE. Glaſs, covered with baſket work; uſed for brandy or vinegar. Spaniſh (Catalonia). 1870. H. 14 in., W. at bottom, $6\frac{1}{4}$ in. 2*s*. 6*d*.

177. '71.

BOTTLE. Plain glaſs, funnel-ſhape, with long ſpout uſed for drinking wine. Spaniſh (Catalonia). 1870. H. 7 in., W. at bottom, 4 in. 6*d*.

178. '71.

BOTTLE. Plain glaſs, funnel-ſhape, with long ſpout uſed for drinking wine. Spaniſh (Catalonia). 1870. H. 7 in., W. at bottom, $3\frac{1}{8}$ in. 6*d*.

179. '71.

BOTTLE. Plain glaſs, funnel-ſhape, with long ſpout uſed for drinking wine. Spaniſh (Catalonia). 1870. H. $6\frac{1}{8}$ in., W. at bottom, $3\frac{3}{4}$ in. 6*d*.

180. '71.

BOTTLE. Plain glaſs, funnel-ſhape, with long ſpout uſed for drinking wine. Spaniſh (Catalonia). 1870. H. $6\frac{1}{8}$ in., W. at bottom, $3\frac{5}{8}$ in. 4*d*.

181. '71.

BOTTLE. Plain glass, funnel-shape, with double neck and partition throughout, and curved spout; used to hold wine and water. Spanish (Catalonia). 1870. H. 9 in., W. at bottom, $5\frac{1}{4}$ in. 8*d*.

182. '71.

BOTTLE. Plain glass, with ring handle and wide spout; used for oil. Spanish (Catalonia). 1870. H. 7 in., W. at bottom, $3\frac{1}{8}$ in. 6*d*.

171. '71.

BOTTLE. Plain glass, funnel-shape, with curved neck and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $8\frac{5}{8}$ in., W. at bottom, $4\frac{1}{2}$ in. 10*d*.

172. '71.

BOTTLE. Plain glass, funnel-shape, with curved neck and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. 7 in., W. at bottom, $3\frac{1}{4}$ in. 6*d*.

173. '71.

BOTTLE. Plain glass, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. 9 in., W. at bottom, $4\frac{1}{2}$ in. 8*d*.

174. '71.

BOTTLE. Plain glass, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $7\frac{1}{2}$ in., W. at bottom, $3\frac{3}{4}$ in. 6*d*.

175. '71.

BOTTLE. Plain glafs, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. 8 in., W. at bottom, $3\frac{1}{2}$ in. 6*d.*

176. '71.

BOTTLE. Plain glafs, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $6\frac{3}{4}$ in., W. at bottom, $3\frac{1}{2}$ in. 4*d.*

165. '71.

BOTTLE. Plain glafs, with spiral white lines and applied ornament, funnel-shape, with waved lip and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $10\frac{1}{4}$ in., W. at bottom, 5 in. 1*s.* 8*d.*

166. '71.

BOTTLE. Plain glafs, with spiral white lines, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. 10 in. W. at bottom, 6 in. 1*s.* 8*d.*

See Plate XXI.

167. '71.

BOTTLE. Plain glafs, with spiral white lines, bulbous body, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. 10 in. W. at bottom, $5\frac{1}{2}$ in. 1*s.* 8*d.*

168. '71.

BOTTLE. Plain glafs, with spiral white lines, funnel-shape, with wide mouth and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $8\frac{1}{2}$ in. W. at bottom, $5\frac{1}{4}$ in. 1*s.* 3*d.*



BOTTLE.
Modern Spanish.
(166. '71.)



169. '71.

BOTTLE. Plain glass, with spiral white lines funnel-shape, with curved neck and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $10\frac{1}{2}$ in., W. at bottom, $6\frac{1}{2}$ in. 1s. 8d.

170. '71.

BOTTLE. Plain glass, funnel-shape, with curved neck and long spout; used for drinking wine. Spanish (Catalonia). 1870. H. $9\frac{3}{4}$ in., W. at bottom, 5 in. 1s. 3d.

158. '71.

BOTTLE. Plain glass, decanter-shape, with ring handle and curved spout. Spanish (Catalonia). 1870. H. $9\frac{1}{4}$ in., W. at bottom, $3\frac{1}{4}$ in. 11d.

159. '71.

BOTTLE. Plain glass, decanter-shape, with ring handle and curved spout. Spanish (Catalonia). 1870. H. 10 in., W. at bottom, $3\frac{3}{4}$ in. 11d.

160. '71.

BOTTLE. Plain glass, decanter-shape, with ring handle and curved spout. Spanish (Catalonia). 1870. H. 8 in., W. at bottom, $2\frac{3}{4}$ in. 6d.

161. '71.

BOTTLE. Plain glass, decanter-shape, with ring handle and curved spout. Spanish (Catalonia). 1870. H. $11\frac{1}{2}$ in. W. at bottom, $3\frac{3}{4}$ in. 1s. 3d.

162. '71.

BOTTLE. Plain glaſs, fluted, decanter-ſhape, with ring handle and curved ſpout. Spaniſh (Catalonia). 1870. H. $10\frac{1}{2}$ in., W. at bottom, $3\frac{1}{2}$ in. 1s.

163. '71.

BOTTLE. Plain glaſs, with ſpiral white lines, decanter-ſhape, with ring handle and curved ſpout. Spaniſh (Catalonia). 1870. H. 11 in., W. at bottom, $4\frac{1}{4}$ in. 1s. 8d.

164. '71.

BOTTLE. Plain glaſs, with ſpiral white lines and applied ornament, funnel-ſhape, with waved lip and long ſpout; uſed for drinking wine. Spaniſh (Catalonia). 1870. H. $10\frac{5}{8}$ in., W. at bottom, $6\frac{1}{2}$ in. 1s. 8d.

152. '71.

BOTTLE. Plain glaſs, bulbous body, with ring handle and curved ſpout. Spaniſh (Catalonia). 1870. H. $11\frac{1}{2}$ in., W. at bottom, $4\frac{1}{2}$ in. 1s. 6d.

153. '71.

BOTTLE. Plain glaſs, bulbous body, with ring handle and curved ſpout. Spaniſh (Catalonia). 1870. H. 6 in., W. at bottom, $2\frac{3}{4}$ in. 6d.

154. '71.

BOTTLE. Plain glaſs, with ſpiral white lines, bulbous body, with ring handle and curved ſpout. Spaniſh (Catalonia). 1870. H. 12 in., W. at bottom, $4\frac{1}{4}$ in. 2s. 2d.

155. '71.

BOTTLE. Plain glafs, with perpendicular bands of vitro di trina, bulbous body, with ring handle and curved spout. Spanish (Catalonia). 1870. H. $11\frac{1}{2}$ in., W. at bottom, $4\frac{1}{4}$ in. 2s. 2d.

156. '71.

BOTTLE. Plain glafs, with spiral white lines, bulbous body, with ring handle and curved spout. Spanish (Catalonia). 1870. H. $11\frac{1}{4}$ in., W. at bottom, $4\frac{1}{4}$ in. 2s. 2d.

157. '71.

BOTTLE. Pale green glafs, with white stripes and applied ornament, bulbous body, with ring handle surmounted by a cock, and tapering spout. Spanish (Catalonia). 1870. H. 14 in., W. at bottom, $4\frac{3}{4}$ in. 2s. 2d.

200. '71.

CANDLESTICKS, a pair. Plain glafs, with waved bands round the nozzle. Spanish (Catalonia). 1870. H. 8 in., W. at bottom, $4\frac{3}{8}$ in. 2s.

201. '71.

CANDLESTICK. Pale green glafs, ribbed, with waved bands round the nozzle. Spanish (Catalonia). 1870. H. 10 in., W. at bottom, $4\frac{5}{8}$ in. 1s.

202. '71.

CANDLESTICK. Pale green glafs, ribbed, with waved bands round the nozzle. Spanish (Catalonia). 1870. H. $8\frac{7}{8}$ in., W. at bottom, $3\frac{5}{8}$ in. 1s.

195. '71.

CRUET. Green glaſs, with double mouth and partition throughout; for oil and vinegar. Spaniſh (Catalonia). 1870. H. $5\frac{1}{2}$ in., W. $3\frac{3}{4}$ in. 2*d.*

187. '71.

DECANTER. Plain glaſs, with white bands. Spaniſh (Catalonia). H. 10 in., W. at bottom, $4\frac{7}{8}$ in. 1*s.* 6*d.*

142. '71.

JUG. Plain glaſs, funnel-ſhape, with wide mouth, handle, and curved ſpout. Spaniſh (Catalonia). 1870. H. $5\frac{3}{4}$ in., W. at bottom, $3\frac{3}{4}$ in. 3*d.*

143. '71.

JUG. Plain glaſs, funnel-ſhape, with wide mouth, handle, and curved ſpout. Spaniſh (Catalonia). 1870. H. $5\frac{3}{4}$ in., W. at bottom, $3\frac{3}{4}$ in. 3*d.*

144. '71.

JUG. Plain glaſs, funnel-ſhape, with wide mouth, handle, and curved ſpout. Spaniſh (Catalonia). 1870. H. $5\frac{1}{4}$ in., W. at bottom, $3\frac{3}{8}$ in. 3*d.*

146, 146*a.* '71.

JUGS, two ſmall. Plain glaſs, funnel-ſhape, with wide mouth, handle, and curved ſpout. Spaniſh (Catalonia). 1870. H. $2\frac{1}{4}$ in., W. at bottom, 2 in. 2*d.*

147. '71.

JUG. Green glafs, funnel-shape, with wide mouth, handle, and curved spout. Spanish (Catalonia). 1870 H. 6 in., W. at bottom, $4\frac{1}{2}$ in. 3*d.*

148. '71.

JUG. Green glafs, funnel-shape, with wide mouth, handle, and curved spout. Spanish (Catalonia). 1870. H. 5 in., W. at bottom, 3 in. 3*d.*

145. '71.

JUG. Plain glafs, funnel-shape, with wide mouth, handle, and curved spout. Spanish (Catalonia). 1870. H. $4\frac{1}{2}$ in., W. at bottom, 3 in. 2*d.*

198. '71.

JAR. Plain glafs, ribbed. Spanish (Catalonia). 1870. H. $5\frac{3}{4}$ in., W. at top, $4\frac{3}{4}$ in. 2*d.*

188. '71.

LAMP. Plain glafs, with spiral white lines, pear-shape; for suspension. Spanish (Catalonia). 1870. H. 14 in., W. 10 in. 1*s.* 6*d.*

197. '71.

LAMP. Plain glafs, with projecting band and wide mouth, for ecclesiastical use. Spanish (Catalonia). 1870. H. $4\frac{1}{2}$ in., W. at top, $4\frac{1}{4}$ in. 2*d.*

189. '71.

LAMP. Plain glaſs, with ſpiral white lines, pear-ſhape; for ſuſpenſion. Spaniſh (Catalonia). 1870. H. 7 in., W. $4\frac{3}{4}$ in. 4*d.*

190. '71.

LAMP. Plain glaſs, bottle-ſhape. Spaniſh (Catalonia). 1870. H. $5\frac{5}{8}$ in., W. at bottom, 3 in. 2*d.*

196. '71.

MODELS (ten). Glaſs; in the forms of veſſels uſed by the peaſantry of Spain. Spaniſh (Catalonia). 1870. Various dimenſions. 1*s.* 6*d.*

194. '71.

PEPPER Caſter. Plain glaſs, decanter-ſhape. Spaniſh (Catalonia). 1870. H. 4 in., W. at bottom, $2\frac{1}{2}$ in. 2*d.*

193. '71.

PEPPER Caſter. Plain glaſs, decanter-ſhape. Spaniſh (Catalonia). 1870. H. $4\frac{1}{4}$ in., W. at bottom, $2\frac{1}{4}$ in. 2*d.*

185. '71.

SALT-CELLAR. Pale green glaſs; for ſuſpenſion. Spaniſh (Catalonia). 1870. H. 5 in., W. $5\frac{1}{8}$ in. 4*d.*

186. '71.

SALT-CELLAR. Pale green glaſs; for ſuſpenſion. Spaniſh (Catalonia). 1870. H. 4 in., W. $3\frac{1}{4}$ in. 2*d.*

191. '71.

HOLY-WATER Vessel. Plain glass, with reticulated back, surmounted by a cross. Spanish (Catalonia). 1870. H. 9 in., W. 4 in. 6*d.*

192. '71.

VESSEL. Plain glass, spirally-ribbed, with three narrow spouts. Spanish (Catalonia). 1870. H. 9 in., W. $4\frac{1}{2}$ in. 6*d.*

VENICE.

7251. '60.

BOTTLE. Schemelz glass. Oviform. Venetian. (By Lorenzo Radi.) 1860. H. 4 in., diam. $3\frac{1}{4}$ in. Given by Count Cornaro, Venice.

164. '69.

BOWL. Glass. Ruby-coloured, with white glaze inside. Venetian. (Salviati & Co.) About 1868. H. $3\frac{3}{4}$ in. diam. $7\frac{7}{8}$ in. 12*s.*

898. '68.

BOWL. Opal glass. Lattice-patterned with flower and leaves on the outer rim. Venetian. H. $3\frac{1}{2}$ in., diam. $10\frac{1}{2}$ in. 1*l.* 5*s.*

9041, 9042. '63.

CANDELABRA. A pair, each for six lights, in white moulded glass, with glass ornaments of various colours. Venetian. About 1860. H. 2 ft., W. 1 ft. 6 in. 16*l.*

9043. '63.

CHANDELIER. For ſix lights. White glaſs, with coloured ornaments and pendants. Venetian. About 1860. H. 2 ft. $3\frac{1}{2}$ in., W. 1 ft. 5 in. 10*l*.

1189. '73.

CUP. Millefiore and ſchmelze glaſs, with two handles. "Roman" ware. Made by Salviati & Co. Venetian. 1872. H. $2\frac{1}{2}$ in., W. at handles $5\frac{1}{2}$ in. 3*l*. 3*s*.

84. '70.

DISH. Glaſs. With network of white latticinio lines. Venetian (Salviati & Co.) 1869. Diam. $13\frac{1}{4}$ in. 3*l*. 3*s*.

83. '70.

EWER. Glaſs, with network of white latticinio lines. Venetian. 1869. (Salviati & Co.) H. $17\frac{1}{2}$ in., diam. of baſe, $6\frac{1}{2}$ in. 5*l*.

165. '69.

EWER. Glaſs, with ſpiral ſtripes of opaque white, blue, and avanturine. Venetian. (Salviati & Co.) About 1868. H. $13\frac{1}{4}$ in., W. of foot, $4\frac{1}{8}$ in. 1*l*. 8*s*.

1191. '73.

EWER. Purple and millefiore glaſs, with long neck, waved lip, and upright handle. "Roman" ware. Made by Salviati & Co. Venetian. 1872. H. 9 in., diam. $\frac{5}{8}$ in. 5*l*. 5*s*.

68. '70.

FLOWER Vase. Glafs. Spiral latticinio thread pattern with clear and ruby scroll ornaments on the stem. Venetian. 1869. (Salviati & Co.) H. $9\frac{1}{4}$ in., diam. of base, $2\frac{7}{8}$ in. 10s. 6d.

75. '70.

FLOWER Vase. Opalised glafs. With three handles and openings for cut flowers, blue collar round neck, and masks on handles. Venetian. 1869. (Salviati & Co.) H. $10\frac{3}{8}$ in., diam. of base, 4 in. 2l.

77. '70.

FLOWER Vase. Schmelz glafs of various colours. With three handles and openings for cut flowers. Venetian. 1869. (Salviati & Co.) H. $6\frac{7}{8}$ in., diam. of base, $2\frac{3}{4}$ in. 17s. 6d.

882. '68.

GOBLET. Ruby glafs bow, with vase-shaped stem, supporting a circular open ornament of various colours enclosing ruby globe. Venetian. About 1865. H. $13\frac{1}{8}$ in., diam. of ornament, $4\frac{3}{4}$ in. 3l. 13s. 6d.

880. '68.

GOBLET. Ruby glafs, with involuted stem and flowers in various colours. Venetian. About 1865. H. $11\frac{5}{8}$ in. 2l. 14s. 6d.

881. '68.

GOBLET. Glafs. Bowl striped with avanturine on stem, with twisted, coloured, and gold ornament and flowers. Venetian. About 1865. H. $11\frac{1}{4}$ in. 2l. 12s. 6d.

166. '69.

GOBLET. Glaſs. The bowl and foot pale blue on tall ſtem of tranſparent open-work, with three blue flowers. Venetian. About 1865. (Salviati & Co.) H. $12\frac{3}{8}$ in., diam. of bowl, $3\frac{7}{8}$ in. 2*l.* 8*s.*

79. '70.

GOBLET. Glaſs. The bowl with alternate bands of white and red interlaced latticinio, clear foot and baluſter ſtem, ſurmounted by open-work ornament enclosing a blue flower. Venetian. 1869. (Salviati & Co.) H. $11\frac{7}{8}$ in., diam. of baſe, $4\frac{3}{4}$ in. 2*l.* 12*s.* 6*d.*

81. '70.

GOBLET. Glaſs. Clear bowl and foot, twiſted baluſter ſtem with wings, ſurmounted by a circle of open ſcroll-work with flowers of various colours. Venetian. 1869. (Salviati & Co.) H. $15\frac{1}{8}$ in., diam. of baſe, $5\frac{3}{4}$ in. 3*l.* 3*s.*

82. '70.

GOBLET and Cover. Glaſs. Clear bowl and foot, twiſted baluſter ſtem with blue wings, ſurmounted by a circle of blue and clear open ſcroll-work with red flowers. On the cover ſimilar flowers with twiſted blue handle. Venetian. 1869. (Salviati & Co.) H. $21\frac{1}{4}$ in., diam. of baſe, $5\frac{3}{4}$ in. 7*l.* 7*s.*

893. '68.

GOBLET. Blue glaſs. Bowl lattice-patterned, ſtem of ruby boſſes and marks. Venetian. About 1865. H. $7\frac{1}{2}$ in. 12*s.* 6*d.*

887. '68.

GOBLET. Opal glaſs. Bowl with ſpiral lines, ſtem ornamented with maſks and boſſes. Venetian. About 1865. H. $7\frac{1}{2}$ in. 12s. 6d.

7252. '60.

ICE Cup and Saucer. Schmelz glaſs, with patches of gold avanturine glaſs inferted. Venetian (Lorenzo Radi). 1860. Cup, H. $3\frac{1}{4}$ in., diam. $2\frac{7}{8}$ in.; diam. of ſaucer, $4\frac{1}{2}$ in. Given by Count Cornaro, Venice.

891. '68.

JUG. Glaſs. Opal and ruby, ſprinkled with avanturine; neck and body with vertical ribs. Venetian. About 1865. H. $11\frac{3}{4}$ in. 1l. 5s.

889. '68.

JUG. Glaſs. Green glaſs ſprinkled with avanturine, the body lattice-patterned. Venetian. About 1865. H. $12\frac{1}{4}$ in. 1l. 1s.

890. '68.

JUG, Glaſs, with twiſted handle. Ruby and dark blue body ſprinkled with avanturine and crackled. Venetian. About 1865. H. 13 in. 2l. 12s. 6d.

900. '68.

NECKLACE of thirty-five white corded glaſs beads with blue lines, and two bracelets to match of eleven beads each. Venetian. About 1865. Diam. of bead, $\frac{1}{8}$ in. 15s.

901. '68.

NECKLACE of thirty-eight beads and two bracelets of twelve beads each. Glasf, black, with gold bands, set with imitation rubies, pearls, and crystals. Venetian. About 1865. Diam. of larger bead, 1 in., of smaller bead $\frac{3}{4}$ in. 13s.

902. '68.

NECKLACE of forty beads, and two bracelets of twelve beads each. Glasf, gold, set with imitation rubies, pearls, and crystals, in lines. Venetian. About 1865. Diam. of bead, $\frac{3}{4}$ in. 13s. 6d.

903. '68.

NECKLACE of forty-nine beads, and two bracelets of thirteen beads each. Glasf, gold, set with imitation emeralds and rubies between filigree work. Venetian. About 1865. Diam. of bead, $\frac{3}{4}$ in. 16s. 6d.

357 to 357 *nn.* '72.

SPECIMENS of Venetian Glasf, Millefiore, Avanturine, &c. Knife and cane handles, scent bottle, needle case, brooches, &c. Forty specimens. Manufactured by Messrs. Franchini & Son, of Venice. Venetian. 1846. Given by Messrs. Franchini & Son.

67. '70.

TAZZA. Glasf. The bowl opalised, with waves of red and avanturine, avanturine serpent stem, and clear foot. Venetian. 1869. (Salviati & Co.) H. 6 in., diam. $7\frac{5}{8}$ in. 2l.

17. '71.

TAZZA. The bowl of aquamarine glaſs, with waved edge, and plain baluſter ſtem and foot. Made by Salviati & Co. Venetian. 1870. H. $5\frac{7}{8}$ in., diam. $7\frac{1}{4}$ in. 15s.

899. '68.

TAZZA. Green glaſs. With figures and birds, painted in white, holding feſtoons of flowers in gold. Venetian. About 1865. H. $2\frac{1}{2}$ in., diam. $6\frac{3}{4}$ in. 2l. 2s.

72. '70.

TAZZA. Glaſs. The bowl with interlaced ſtripes of latticinio and avanturine, with green margin, avanturine ſerpent ſtem, and clear foot. Venetian. 1869. (Salviati & Co.) H. $5\frac{1}{8}$ in., diam. of top, $5\frac{3}{8}$ in. 1l. 1s.

73. '70.

TAZZA Vaſe. Clear glaſs. Lobed bowl with interlaced ſtripes of white, blue, and avanturine, and baluſter ſtem with raiſed maſks. Venetian. 1869. (Salviati & Co.) H. $5\frac{3}{4}$ in., diam. of baſe, $3\frac{3}{8}$ in. 17s. 6d.

74. '70.

TAZZA Vaſe. Glaſs. The bowl lobed, ſplashed with colours and avanturine, avanturine ſerpent ſtem, and clear foot. Venetian. 1869. (Salviati & Co.) H. $6\frac{7}{8}$ in. diam. of baſe, $4\frac{1}{4}$ in. 2l. 2s.

8037. '62.

VASE. Schmelz glaſs, in imitation of jaſper. Silver-gilt open-work mounting. Venetian. (Dr. A. Salviati.) About 1860. H. $13\frac{1}{4}$ in., W. $8\frac{3}{8}$ in. by $5\frac{7}{8}$ in. (International Exhibition, 1862.) 14*l*.

8038, 8039. '62.

VASES (a pair). Schmelz glaſs, in imitation of jaſper. Silver open-work mounting. Venetian. About 1860. H. $18\frac{3}{4}$ in., diam. 9 in. (International Exhibition, 1862.) Manufactured and given by Dr. Antonio Salviati.

878. '68.

VASE. Green glaſs. Sprinkled with aventurine, with marks and bosses between two bands of white involuted glaſs. Venetian. About 1865. H. $10\frac{5}{8}$ in. 1*l*. 5*s*.

884. '68.

VASE, two-handled. Clear aqua marine glaſs. Mounted with marks and ornaments in blue. Venetian. About 1865. H. 15 in., diam. $10\frac{1}{4}$ in. 1*l*. 15*s*.

885. '68.

VASE, funnel-shaped. Opal glaſs. On ſtem, encircled with blue ornament ſupporting a dolphin. Venetian. About 1865. H. $10\frac{3}{4}$ in. 2*l*. 12*s*. 6*d*.

892. '68.

VASE. Glaſs. Goblet-shaped, green ſprinkled with aventurine, and lattice-patterned, ſtem ornamented with a band

of involuted glaſs and ruby boſſes. Venetian. About 1865.
H. 7 in. 12s. 6d.

894. '68.

VASE, flat-shaped. Schmelz glaſs, in various colours and
avanturine, on green foot. Venetian. About 1865.
H. 12 in. 2l. 2s.

895. '68.

VASE, bowl-shaped. Clear glaſs. With gilt and coloured
ornaments, on amphora ſtem. Venetian. About 1865.
H. $6\frac{3}{4}$ in. 1l. 10s.

896. '68.

VASE, with twiſted handles. Schmelze glaſs, in various
colours, and avanturine. Venetian. About 1865. H.
 $7\frac{3}{8}$ in. 7s. 6d.

897. '68.

VASE, amphora-shaped. Opal glaſs. With blue maſks.
Venetian. About 1865. H. $6\frac{1}{2}$ in. 7s. 6d.

904. '68.

VASE. Schmelz glaſs, in imitation of agate in various
colours, and avanturine. Venetian. About 1865. H.
 $17\frac{5}{8}$ in., diam. $13\frac{3}{8}$ in. 50l.

905. '68.

VASE. Glaſs. Splaſhed with red, yellow, and avanturine.
Venetian. About 1865. H. $9\frac{7}{8}$ in. 1l. 1s.

80. '70.

VASE or Goblet. Glaſs. The bowl opalified, clear foot,
and baluſter ſtem with wings and flowers on the top, fur-

mounted by a circle of open-work enclosing a ball. Venetian. 1869. (Salviati & Co.) H. 11 in., diam. of baſe, $4\frac{5}{8}$ in. 2*l.* 12*s.* 6*d.*

70. '70.

VASE or Goblet. Glaſs. Ruby bowl and foot, and twiſted ſtem of ſpiral ruby and clear ornament. Venetian. 1869. (Salviati & Co.) H. $9\frac{1}{4}$ in., diam. of baſe, $3\frac{1}{2}$ in. 1*l.* 10*s.*

71. '70.

VASE. Clear glaſs. Of antique form, with twiſted ſtem and open-work ornament. Venetian. 1869. (Salviati & Co.) H. $7\frac{1}{8}$ in., diam. of mouth, $4\frac{3}{4}$ in. 10*s.* 6*d.*

1188. '73.

VASE. Green and millefiore glaſs, with two handles; "Roman" ware. Made by Salviati & Co. Venetian. 1872. H. $4\frac{1}{2}$ in., W. at handles 4 in. 2*l.* 12*s.* 6*d.*

1190. '73.

VASE. Millefiore glaſs; "Roman" ware. Made by Salviati & Co. Venetian. 1872. H. $4\frac{7}{8}$ in., diam. $1\frac{3}{4}$ in. 1*l.* 15*s.*

886. '68.

WINE Glaſs. Ruby. On opal ſtem in the form of a ſwan. Venetian. About 1865. H. $8\frac{7}{8}$ in. 1*l.* 10*s.*

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17. '71	Tazza	191	95. '53	Drinking glafs	143
18. '67	Beaker	41	97. '53	Tankard and cover	152
19. '67	Cup	51	98. '53	Wine glafs	78
20. '67	Do.	52	100. '53	Flower glafs	59
40. '67	Bead	8	101. '53	Wine glafs	78
54. '72	Drinking glafs	141	102. '53	Do.	78
56. '44	Vafe	172	103. '53	Vafe	162
57. '44	Do.	172	104. '53	Do.	162
62. '52	Milk ewer	169	105. '70	Wine glafs	170
66. '53	Goblet and cover	147	106. '53	Do.	79
67. '53	Bottle	139	107. '53	Liqueur glafs	65
67. '70	Tazza	190	108. '53	Goblet	61
68. '70	Flower vafe	187	135. '73	Do.	105
69. '52	Bottle	138	136. '73	Cup	99
70. '70	Vafe	194	137. '73	Vafe	125
71. '53	Goblet and cover	148	138. '73	Do.	125
71. '70	Vafe	194	139. '73	Do.	125
72-72*. '53	Cup, &c.	53	140. '73	Do.	127
72. '70	Tazza	191	141. '73	Do.	127
73. '53	Vafe	4	142 to } '71	Jugs	182
73. '70	Tazza vafe	191	144. }		
74. '53	Grotesque vessel	64	142 to } '73	Vases	128
74. '70	Tazza vafe	191	144. }		
75. '53	Flower glafs	59	145. '71	Jug	183
75. '70	Flower vafe	187	145. '73	Vafe	132
77. '53	Flower glafs	58	146-46*. '71	Jugs	182
77. '70	Flower vafe	187	147. '71	Jug	183
77. '72	Cup	140	148. '71	Do.	183
78. '53	Flower glafs	58	146 to } '73	Vases	126
79. '53	Liqueur glafs	65	150. }		
79. '70	Goblet	182	149-150. '71	Bottles	175
80. '53	Wine glafs	76	151. '71	Bottle	176
80. '70	Vafe	193	151 to } '73	Vases	128
81. '70	Goblet	188	153. }		
82. '53	Wine glafs	76	152 to } '71	Bottles	180
82. '70	Goblet and cover	188	154. }		
83. '70	Ewer	186	154 to } '73	Vases	129
84. '53	Wine glafs	78	157. }		
84. '70	Dish	186	155-57. '71	Bottles	181
85. '53	Wine glafs	78			

* The numbers attached to the Specimens are those of the Museum Register; the two following figures refer to the year when they were acquired.

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158-61. '71	Bottles . . .	179	202. '71	Candlestick . . .	181
158. '73	Vase . . .	132	202. '73	Cup . . .	102
159. '70	Scent bottle . . .	69	203. '71	Bottle . . .	176
160. '65	Fork . . .	60	203. '73	Cup . . .	103
159 to } '73	Vases . . .	125	204. '73	Tazza . . .	118
161. '71	Bottles . . .	180	205. '73	Do. . .	119
162 to } '71	Bottles . . .	180	206. '73	Do. . .	119
164. '73	Vase . . .	133	207. '73	Do. . .	119
164. '69	Bowl . . .	185	208. '73	Do. . .	119
163-65. '73	Vases . . .	127	209. '73	Do. . .	120
165. '69	Ewer . . .	186	210. '73	Do. . .	120
166. '69	Goblet . . .	188	211. '73	Do. . .	119
165 to } '71	Bottles . . .	178	212-124. '73	Liqueur stand . . .	111
168. '73	Vase . . .	129	213. '73	Basket . . .	88
166-67. '73	Vases . . .	133	214. '73	Do. . .	88
168. '73	Vase . . .	129	215. '73	Do. . .	88
169-70. '71	Bottles . . .	179	216. '73	Do. . .	88
169. '73	Vase . . .	126	217. '73	Do. . .	88
170. '73	Vase . . .	131	218. '73	Do. . .	89
171 to 74. '71	Bottles . . .	177	219. '73	Do. . .	88
171-74. '73	Vases . . .	131	220. '73	Pilgrim's bottle . . .	115
175-76. '71	Do. . .	178	221. '73	Do. . .	115
175. '73	Vase . . .	129	222. '73	Do. . .	115
176. '73	Do. . .	130	223. '73	Do. . .	114
177 to } '71	Bottles . . .	176	224. '73	Do. . .	114
180. '73	Vases . . .	132	225. '73	Do. . .	114
177-78. '73	Jugs . . .	107	226. '73	Do. . .	114
179-80. '73	Bottles . . .	177	227. '73	Do. . .	114
181-82. '71	Jugs . . .	109	228. '73	Do. . .	115
181-82. '73	Bottles . . .	175	229. '73	Do. . .	113
183-84. '71	Jug . . .	108	230. '73	Do. . .	113
183. '73	Bottle . . .	95	231. '73	Do. . .	113
184. '73	Salt cellars . . .	184	232. '73	Do. . .	113
185-86. '71	Jugs . . .	107	233. '73	Do. . .	113
185-86. '73	Decanter . . .	182	234. '73	Do. . .	113
187. '71	Jug . . .	108	235. '73	Bottle . . .	94
188. '71	Lamp . . .	183	236. '73	Do. with stopper . . .	94
188-89. '73	Mugs . . .	112	237. '73	Do. . .	94
189-90. '71	Lamps . . .	184	238. '66	Chandelier . . .	169
190-91. '73	Jugs . . .	108	238. '73	Bottle with stopper . . .	94
191. '71	Holy water vessel . . .	185	239. '73	Do. . .	94
192. '71	Vessel . . .	185	240. '73	Do. . .	94
192-93. '73	Pepper casters . . .	184	241. '53	Ewer . . .	55
193-94. '71	Mugs . . .	112	241. '72	Drinking glafs . . .	141
194. '73	Jug . . .	108	241. '73	Vase . . .	134
195. '71	Cruet . . .	182	242. '53	Tazza . . .	74
196. '71	Models (ten) . . .	184	242. '72	Goblet with cover . . .	145
195-96. '73	Mugs . . .	111	242. '73	Bottle . . .	95
197. '71	Lamp . . .	183	243. '72	Jar . . .	148
197. '73	Mug . . .	112	243. '73	Bottle . . .	95
198. '71	Jar . . .	183	244. '53	Salver . . .	68
198. '73	Mug . . .	112	244. '72	Drinking glafs, etc. . .	141
199. '73	Bowl . . .	97	244. '73	Bottle . . .	95
200. '71	Candlesticks . . .	181	245. '72	Tumbler . . .	152
200. '73	Bowl . . .	97	245. '73	Vase . . .	134
201. '71	Candlestick . . .	181	246. '73	Bottle with stopper . . .	95
201. '73	Bowl . . .	97	247. '73	Do. . .	90
			248. '73	Bottle . . .	90
			249. '73	Do. . .	90

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250. '73	Bottle . . .	90	300. '73	Pocket glass . . .	117
251. '73	Do.	90	301. '73	Do.	117
252. '73	Do.	90	302. '64	Bowl	161
253. '73	Do.	91	302. '73	Pocket glass . . .	117
253. '74	Medallion . . .	66	303. '73	Tumbler	123
254. '73	Bottle	91	304. '73	Do.	123
255. '73	Do.	91	305. '73	Do.	124
256. '73	Do.	91	306. '73	Do.	122
257. '73	Do.	91	307. '73	Do.	121
258. '73	Do.	91	308. '73	Do.	121
259. '73	Do.	92	309. '73	Do.	124
260. '73	Do.	92	310. '73	Do.	124
261. '73	Do.	92	311. '73	Do.	124
262. '73	Do.	92	312. '73	Do.	124
263. '73	Do.	92	313. '73	Do.	122
264. '73	Do.	92	314. '73	Do.	122
265. '73	Do.	93	315. '73	Do.	122
266. '73	Do.	93	316. '73	Do.	123
266. '74	Goblet with cover .	60	317. '73	Do.	123
267. '73	Bottle	93	318. '73	Do.	123
267. '74	Seau	69	319. '73	Do.	122
268. '73	Bottle	93	320. '73	Vase	134
268. '74	Do.	44	321. '73	Do.	134
269. '73	Do.	93	322. '73	Tumbler	124
269. '74	Tazza	70	323. '73	Do.	123
270. '73	Bottle	93	324. '73	Cup	102
270. '74	Do.	44	325. '73	Do.	102
271. '73	Jug	109	326. '73	Do.	102
272. '73	Do.	109	327. '73	Do.	102
273. '73	Cruet	99	328. '73	Tumbler	122
273. '74	Ewer	55	329. '73	Do.	121
274. '73	Bottle	95	330. '73	Vase	132
275. '73	Do.	96	331. '73	Do.	130
275. '74	Medallion . . .	21	332. '73	Do.	130
276. '73	Bottle	96	333. '73	Vase	131
276. '74	Medallion . . .	21	334. '73	Jug	109
277. '73	Bottle	89	335. '54	Ice-cup and stand .	64
278. '73	Do.	89	335. '73	Vase	130
279. '73	Do.	89	336. '73	Cup	103
280. '73	Vase	133	337. '73	Do.	104
280. '74	Medallion . . .	21	338. '73	Do.	104
281. '73	Vase	133	339. '73	Do.	105
282. '73	Do. with cover .	134	340. '73	Do.	101
283. '73	Salt-cellar . . .	117	341-41 ^a . '73	Cup and saucer . .	101
284. '73	Beaker	89	342. '73	Cup	102
285. '73	Jug with cover .	110	343. '73	Do.	100
286. '73	Jar Do.	107	344. '73	Do.	100
287. '73	Do. Do.	107	345. '73	Do.	100
288. '73	Lamp	111	346. '73	Do.	100
289. '73	Do.	110	347. '73	Do.	101
290. '73	Bottle	96	348. '73	Do.	101
291-92. '73	Jugs	110	349. '73	Do.	99
293-93 ^b . '73	Beaker, cover and plateau	89	350. '73	Do.	99
294. '73	Vase	130	351-51 ^a . '73	Cup and saucer . .	100
295. '73	Pocket glass . .	116	352. '73	Cup	100
296. '73	Do.	116	353. '73	Standing glass . . .	118
297. '73	Do.	116	354. '73	Cup	104
298. '73	Do.	116	355. '73	Do.	103
299. '73	Do.	116	355. '76	Goblet with cover .	145
			356. '73	Goblet	106

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357-57 ⁿⁿ . '72.	Specimens of Venetian and other glaſs.	190	410. '54	Cup . . .	51
357. '73	Liqueur glaſs . . .	111	419. '54	Do. . . .	53
358. '73	Cup	104	463. '73	Wine glaſs . . .	84
359. '54	Do.	161	464. '73	Drinking cup . .	141
359. '73	Wine glaſs . . .	135	465. '73	Tankard	151
360. '73	Do.	135	466. '73	Drinking glaſs, &c..	143
361. '73	Do.	134	467. '73	Bottle	139
362. '73	Cup	99	468. '73	Tumbler	152
363. '73	Do.	102	469. '73	Wiederkom . . .	152
364. '73	Vaſe	130	470. '73	Jug	150
365. '73	Shoe	118	471. '73	Cup	140
366. '73	Citron	98	473. '75	Flaſk	85
367. '73	Bottle for ſcent .	96	474. '75	Coin	33
368. '73	Salt-cellar . . .	117	475. '75	Do.	33
369. '54	Vaſe	169	476. '75	Do.	34
369. '73	Cup	103	487. '53	Vaſe and cover .	74
370. '54	Goblet	169	488. '53	Goblet and cover .	63
370. '73	Inkſtand	106	489. '54	Tazza	74
371. '73	Lamp	110	490. '54	Salver	68
372. '54	Decanter	169	504. '69	Vaſe	172
372. '73	Do.	110	520. '72	Goblet with cover	147
373. '73	Flaſk	105	532. '54	Bottle	168
374. '73	Tazza	120	537. '64	Tazza	70
374 ^a . '54	Wine glaſs . . .	170	544-44 ^b . '68	Comb (portions of)	85
375. '73	Hand bell	106	565. '53	Drinking glaſs, &c..	143
376. '73	Jar with cover .	106	566. '53	Bottle	46
377. '73	Do. Do.	106	567. '53	Ewer	55
378. '73	Vaſe	133	568. '53	Cruet	50
379. '73	Bottle for ſcent .	97	568. '72	Staff, &c. . . .	151
380. '73	Barrel	87	569. '53	Bottle	46
381. '73	Toy	120	571. '72	Jug	149
382. '73	Do.	120	572. '53	Bottle	139
383. '73	Do.	120	572. '72	Goblet	147
384. '73	Do.	121	573. '54	Jug	160
385. '73	Cafe for knitting needle	98	574. '54	Wine glaſs . . .	154
386. '73	Do. Do.	98	575. '52	Do.	154
387. '73	Smoothing imple-ments.	118	578. '54	Do.	170
388. '73	Vaſe	132	579. '54	Do.	170
389. '73	Bottle for ſcent .	97	580. '75	Lamp	38
390. '73	Do. Do.	97	581. '54	Wine glaſs . . .	170
391. '73	Toy	121	581. '75	Veſſel for oil . .	39
392. '73	Model (hat) . . .	111	583. '74	Flaſk	34
393. '73	Salt-cellar . . .	117	584. '74	Cup ſtand	34
394-94 ^a . '73	Dish, etc.	105	585-7. '74	Bottles	27
395-95 ^a . '73	Ball and ſtand . .	87	588. '74	Bottle	28
396. '73	Ball	87	589. '74	Do.	28
397. '73	Do.	87	590. '74	Do.	28
398. '72	Cameo	50	591. '74	Do.	28
398. '73	Cruet-ſtand . . .	98	592. '74	Do.	28
399. '73	Cruet	98	593. '74	Vaſe	40
400. '73	Jug	109	594. '74	Bottle	28
401. '73	Cruet	99	595. '74	Do.	28
402. '73	Holy-water veſſel .	106	610. '69	Jug and cover .	165
403. '73	Cup for ſweetmeats .	104	611-11 ^a . '69	Drinking glaſſes (pair)	164
404. '73	Do. Do.	104	612. '69	Dish on ſtand . .	163
405. '73	Plate	115	613. '69	Do.	164
407-8. '54	Beakers	42	614-14 ^a . '69	Candleſticks (pair) .	163
409. '54	Goblet	61	616. '69	Dish, &c.	164
			617. '69	Bowl	163
			618. '69	Dish	164

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620. '69	Plate . . .	166	915. '55	Scent-bottle . . .	68
621. '69	Plate and cover . . .	166	916. '55	Cup . . .	16
622. '69	Do. . .	166	949. '69	Mug . . .	174
623. '69	Inkstand . . .	165	969. '68	Bowl . . .	15
624. '69	Match stand . . .	165	970. '68	Do. . .	14
625. '69	Scent-bottle, &c. . .	166	971. '68	Do. . .	14
626. '69	Scent-bottle . . .	166	972. '68	Do. . .	14
627. '69	Decanter and stopper . . .	163	973. '68	Do. . .	14
628. '69	Goblet . . .	164	974. '68	Do. . .	15
629. '69	Wine glass . . .	167	975. '68	Patera . . .	22
630. '69	Do. . .	168	976. '68	Bowl . . .	15
631. '69	Goblet . . .	165	977. '68	Patera . . .	22
632. '69	Tazza . . .	167	978. '68	Saucer . . .	23
633. '69	Do. . .	167	979. '68	Patera . . .	22
634. '69	Do. . .	167	980. '68	Saucer . . .	23
636. '69	Wine glass . . .	168	981. '68	Do. . .	23
637. '69	Do. . .	168	982. '68	Do. . .	23
638. '69	Do. . .	167	983. '68	Bowl . . .	15
639. '69	Goblet . . .	165	984. '68	Vase . . .	5
640. '69	Wine glass . . .	167	985. '68	Do. . .	5
653. '69	Vase . . .	162	986. '68	Bottle . . .	2
694. '68	Bottle, broken . . .	160	987. '68	Jug . . .	4
717. '69	Vase . . .	171	988. '68	Vase . . .	5
718. '69	Bottle . . .	171	989. '68	Do. . .	5
719. '69	Vase . . .	171	990. '68	Bottle . . .	10
720. '69	Vase with cover . . .	172	991. '68	Vase . . .	5
818. '64	Scent-bottle . . .	86	992. '68	Do. . .	5
848. '64	Bead . . .	41	993. '68	Do. . .	25
878. '68	Vase . . .	192	994. '68	Bottle . . .	3
880. '68	Goblet . . .	187	994. '73	Plate . . .	115
881. '68	Do. . .	187	995. '68	Vase . . .	6
882. '68	Do. . .	187	995. '73	Plate . . .	116
884. '68	Vase . . .	192	995. '69	Vase . . .	174
885. '68	Do. . .	192	996. '68	Do. . .	6
886. '68	Wine glass . . .	194	996-968. '73	Cup and stand . . .	101
887. '68	Goblet . . .	189	997. '68	Vase . . .	6
889. '68	Jug . . .	189	997. '73	Cup . . .	101
890. '68	Do. . .	189	997. '69	Candlestick . . .	174
891. '68	Do. . .	189	998. '68	Bottle . . .	12
892. '68	Vase . . .	192	998. '73	Chandelier . . .	98
893. '68	Goblet . . .	188	999. '68	Bottle . . .	12
894. '68	Vase . . .	193	999. '73	Tumbler . . .	121
895. '68	Do. . .	193	1000. '68	Bottle . . .	10
896. '68	Vase . . .	193	1000. '69	Tazza . . .	175
896 to 896 } 75 {	Fragments. Mural decorations.	18, 19	1000. '73	Do. . .	119
10 } 75 {			1001. '68	Vase . . .	6
897. '68	Vase . . .	193	1001-1. '73	Cup and saucer . . .	103
898. '68	Bowl . . .	185	1002. '68	Jug . . .	3
899. '68	Tazza . . .	191	1002. '73	Bottle . . .	96
900. '68	Necklace . . .	189	1002. '69	Vase . . .	175
901. '68	Do. . .	190	1003. '68	Jug . . .	3
902. '68	Do. . .	190	1003. '73	Bottle for scent . . .	96
903. '68	Do. . .	190	1004. '68	Jug . . .	3
904. '68	Vase . . .	193	1004. '73	Do. . .	108
905. '68	Do. . .	193	1005. '68	Do. . .	20
910. '64	Box . . .	49	1005. '73	Bottle . . .	94
911. '64	Flask . . .	145	1006. '68	Vase . . .	6
912. '75	Vase . . .	7	1007. '68	Jug . . .	3
			1008. '68	Do. . .	4

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1011. '68	Do.	7	1070. '68	Fragment of bottle . .	20
1012. '68	Do.	24	1071. '68	Cup	16
1013. '68	Bottle	11	1072. '68	Frieze (fragment) . .	19
1014. '68	Do.	11	1073. '68	Do.	19
1015. '68	Do.	11	1074. '68	Cameo (fragment) . .	15
1016. '68	Do.	11	1075. '68	Slab (Do.)	24
1017. '68	Do.	11	1076. '68	Do. (Do.)	24
1018. '68	Jug	4	1077. '68	Do. (Do.)	24
1019. '68	Bottle	10	1078. '68	Bird, figure of a . .	17
1020. '68	Do.	2	1082. '71	Tazza bowl	118
1021. '68	Do.	2	1188. '73	Vase	194
1022. '68	Do.	2	1189. '73	Cup	186
1023. '68	Do.	9	1190. '73	Vase	194
1024. '68	Do.	3	1191. '73	Ewer	186
1025. '68	Do.	1	1193. '54	Goblet	169
1026. '68	Do.	1	1219. '64	Bowl	49
1027. '68	Lachrimatory . .	4	1271. '72	Drinking glass . .	144
1028. '68	Bottle	1	1272. '72	Do.	144
1029. '68	Do.	2	1273. '72	Bottle	47
1030. '68	Do.	10	1299. '70	Do.	12
1031. '68	Do.	10	1300. '70	Do.	12
1032. '68	Do.	10	1301. '70	Do.	13
1033. '68	Do.	10	1302. '70	Do.	13
1034. '68	Handle of vase . .	20	1303. '70	Do.	13
1035. '68	Lachrimatory . .	20	1304. '70	Do.	13
1036. '68	Bottle	12	1305. '70	Do.	13
1037. '68	Do.	12	1306. '70	Cup	158
1038. '68	Lachrimatory . .	20	1307. '70	Bottle	13
1039. '68	Bottle	12	1308. '70	Vessel (fragments) . .	25
1040. '68	Patera	22	1309. '70	Do.	159
1041. '68	Cup	16	1310. '70	Do. (fragment) . .	25
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